

# CRAFT MANUAL

CAMPING SERVICE

CHICAGO COUNCIL, - Boy Scouts of AMERICA

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&

OWASIPPE SCOUT CAMPS

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and printing

## CRAFT MANUAL

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CRAFTSMAN JOB ANALYSIS

I. General Responsibilities

- A. Responsible to the Local Camp Head Ranger for efficient and effective conduct of the Crafts Service of the Local Camp.
- B. Responsible to the Coordinator for the coordination of his program with that of other departments and the Troops in camp. For his participation in the general and special activities of the camp.
- C. A further responsibility of assisting every camper and leader to coordinate head and hands into having hobbies which are so essential in the present day leisure time.
- D. Reading understandingly the Ranger Manual - related topics to the Craft Service Department.

Troop Camping at Owasippe	Service to Troops
Troop Guide Service	Camper - needs - desires - abilities
Departmental setup & clean up	Good Neighbor Policy
Ranger in Action	Elements of Good Teaching
Craft Projects for Troop, Patrol & Scout	Six Requirements of a Good Instructor
Instructional Guidance Service thru	Four Steps in Teaching a Craft Skill
Troop Leadership	Adult Leaders Specialization Course
Advancement Committee Instructions for Owasippe	in Craft
General Program	
A Word About Person and Personal Quarters	
Records - Forms - Reports	
Use of Check (work) Sheet - F. 192	
Closing Camp Instructions	

- E. Reading understandingly and be able to use as references

Handbook for Boys, BSA - Explorer Manual, BSA  
Handicraft by Lester Griswold - Scout Field Book, BSA  
Woodcraft by Bernard S. Mason  
Indian and Camp Handicraft by W. Ben Hunt  
Archery Simplified by Phillip Rounseveille  
Junior Book of Camping and Woodcraft by Bernard S. Mason  
Merit Badge Pamphlets of Archery, Indian Lore, Leatherwork and Woodcarving

- F. The Quartermaster is your assistant (when not busy on the Q.M. job) train him to be a future Craftsman of Owasippe. This is your responsibility. Discuss this with your Camp Director and set up a schedule for him.

Quartermaster to take over Craft Lodge when Craftsman has time off or when in direct charge of the Archery Range.

## Craft Manual of Owasippe

### II. Specific Responsibilities

With Coordinator's aid give craft service to the units thru its leaders whenever possible.

A. Aim - Every camper to take home an article which he made at camp.

#### B. Instruction service and awards

1. Second and First Class Requirements  
Sharpening knife and axe - making tent pegs - etc.
2. Merit Badges
  - Archery Leatherwork
  - Indian Lore Woodcarving
3. Craft Border Strip - see Honors Booklet F. 80
4. Adult Specialization Course in Craft (see F. 233)
5. Articles made of horns, leather, metal and wood  
(See notes and diagrams in this leaflet)
6. Give guidance in making camp gadgets and heavy woodcraft pioneering projects. (See diagrams in this leaflet)
7. Use a check out and in system for all tools.  
See F. 51 (Craft Tools, etc. loaned to Scouts)

### III. Archery Range

You will be in charge of the camp's archery range and its up-keep. Understand archery principles and safety rules for the archery range.

See Archery Simplified - Phillip Rounseville, A. S. Barnes & Co., New York 1931

See Essentials of Archery - L. E. Stemmler, Queens Village, L.I., N.Y.

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ARCHERY MERIT BADGE

Tips to get a group started  
See latest requirements of B.S.A.

Use of the Bow

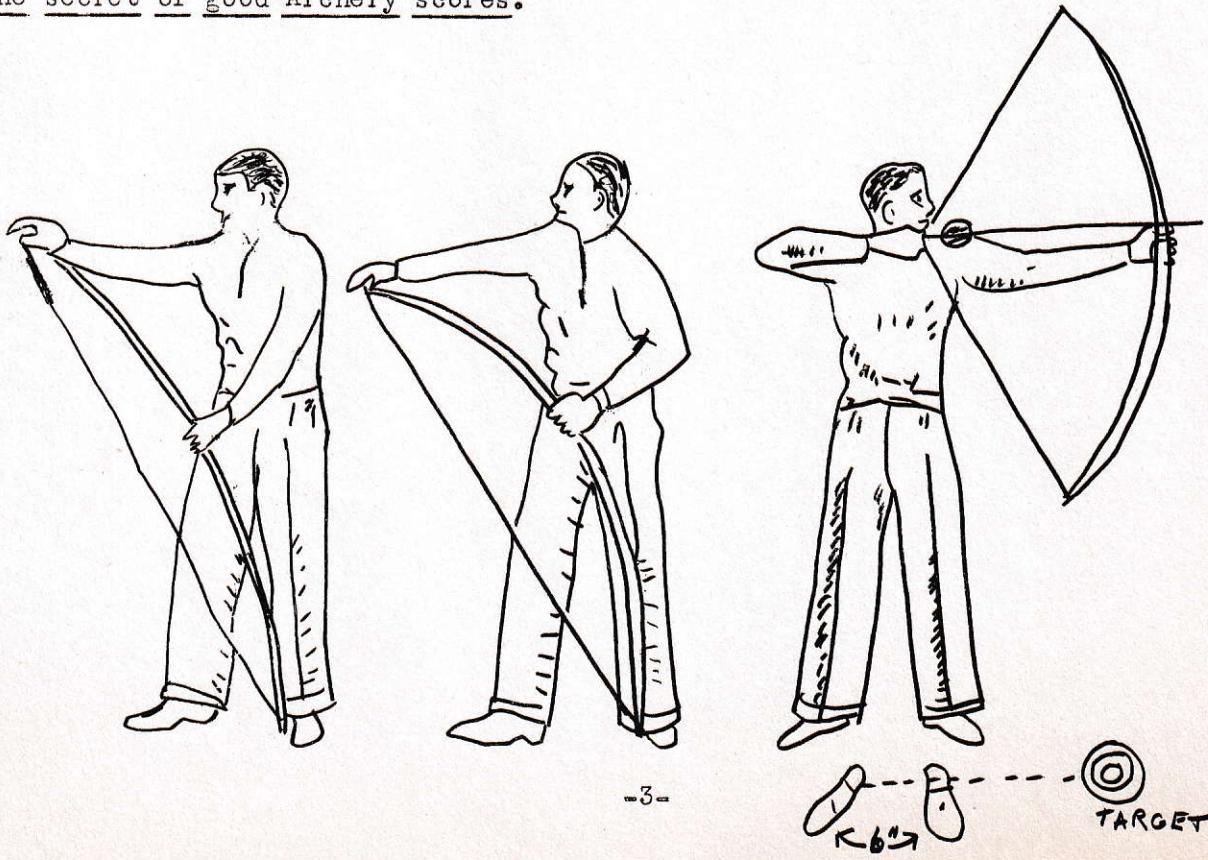
Stringing. Place lower nock firmly against instep, back of bow toward you. Next, engage loop at upper end of bow with forefinger and thumb and while pulling at handle with one hand, push loop into nock, sliding the heel of the hand along the flat side of the bow. Don't attempt to force the loop into the nock; simply "flex" the bow and slide the string into the nock. The string should stand about 6 in. from the handle. To unstring, reverse the operation.

Standing. Have heels and shoulders in line with target, feet about 6 in. apart. With head erect and turned toward target, draw across chest with steady sweeping motion. Bow arm should be slightly bent to absorb the recoil shock.

Drawing. The draw should be made with a quick smooth backward action, with arrow in a line with drawing forearm. The bow should be gripped loosely to insure free arrow flight.

Anchoring. This is important! At full draw, the forefinger of drawing hand should be under or along jaw bone, thumb curled in center of palm; string drawn to tip of nose and to chin.

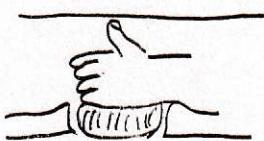
Loosing. The aiming position is held momentarily before releasing the arrow. Do not "pluck" the string! Simply let it roll off the ends of the drawing fingers. Hold off "follow thru" until your arrow has struck. Continual and thoughtful practice is the secret of good Archery scores.



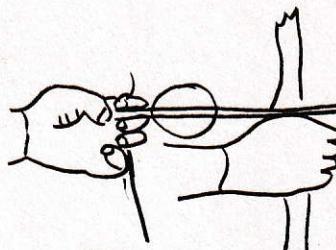
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Position of right hand



Correct distance from string to bow - about 6 in.

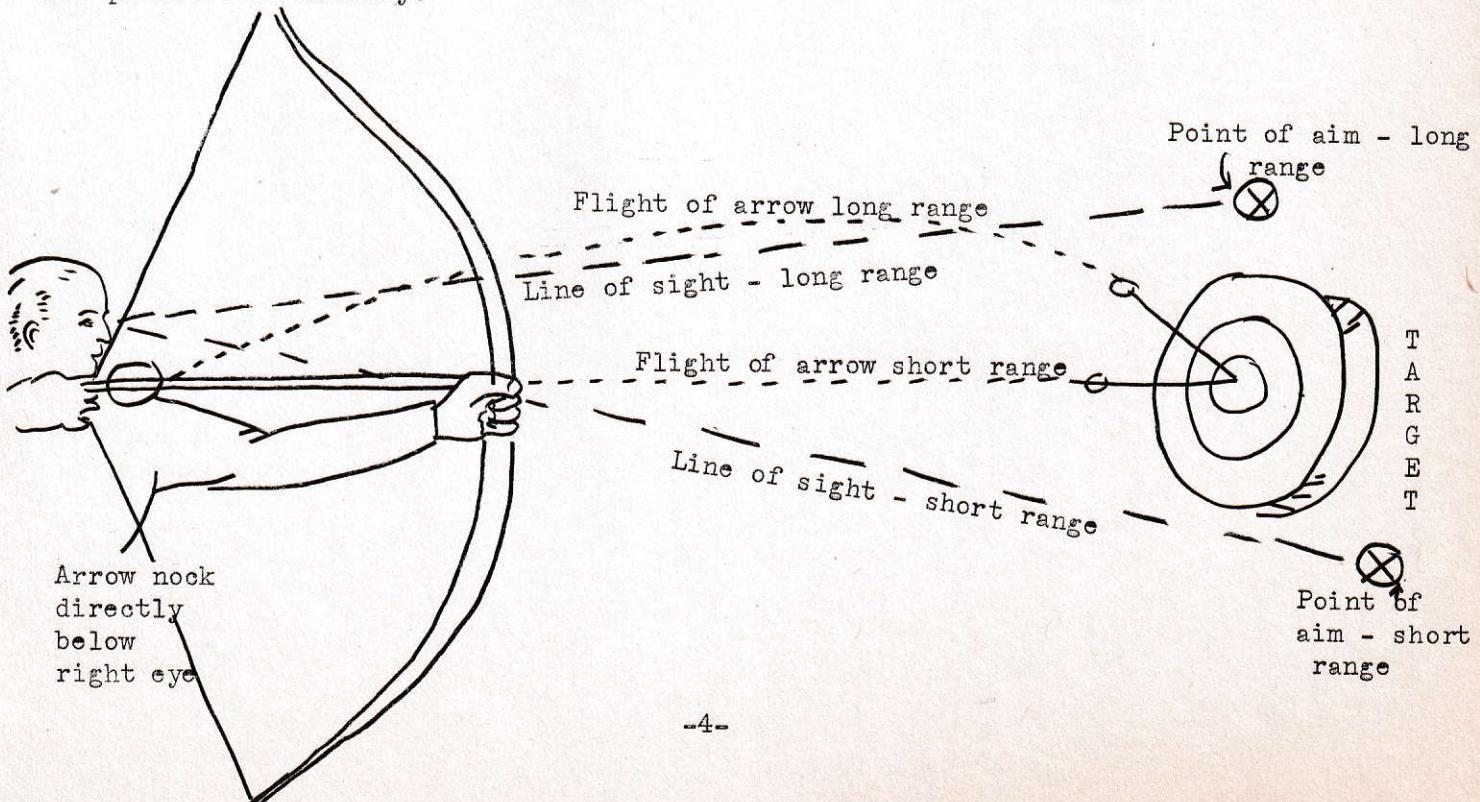


Method of drawing

Methods of Aiming

There are three general methods of shooting a bow; namely (1) instinctive, where one simple drays and "lets fly" by instinct, as in throwing a stone; (2) shooting with a sight which is comparable to sighting a gun, by employing a sighting device on upper limb of bow. This method is popular for short range work; (3) the other method of shooting is that known as "Point of Aim" shooting which is portrayed in the illustration, and is the system most widely in vogue among tournament archers.

In Point of Aim shooting the archer aims at another object to hit the bulls-eye! Accuracy in this method requires that the archer hold and draw the same, and duplicate all form in every shot. Note in the diagram how at short range the line of vision is from the archer's eye, across the tip of the arrow to a point below the target. If successive shots are made in this manner, granting the position is maintained, shots will group in a certain place. By making proper corrections, consistency can be obtained. At the long range the arrow is elevated at the tip and the line of vision is from the eye over the tip of the arrow to some point above the target. Try this method, study the diagram and you will learn this with a little experiment, and find a new pleasure in archery!



## Craft Manual of Owasippe

### Archery Tournament

#### Men

1. Flight shoot. To determine who can shoot the farthest. Class 1, using 38- to 45-pound bow; Class 2, using 45- to 52-pound bow.
2. Balloon shoot. The object is to burst the balloons which are fastened to stakes with three-foot strings.
3. Accuracy. Players shoot at standard target 4 feet in diameter. Forty arrows at 40 yards.

#### Boys

1. Wand shoot. The object is to hit the stick placed against a target 4 feet in diameter, perpendicular to the ground.
2. Accuracy. Players shoot at the standard target 4 feet in diameter. Forty arrows at 40 yards.

#### Women (Family Camp)

1. Accuracy. Players shoot at standard target 4 feet in diameter. Twenty-four arrows at 30 yards.

In addition to the regular tournament, arrangements can be made to have animal objects cut from beaver board and mounted on stakes set in the ground to be used as targets.

### Making the Bow

There were two methods of preparing the old Sioux Indian bow with the double curvature. One was to take the green limb and scrape away with a knife or, as in the early days, with a stone scraper. The limb was then soaked in water for many weeks, bent into shape around pegs and allowed to dry. The other method, quicker, more difficult and less satisfactory, was to steam the piece selected, place it around the pegs and allow it to dry. After much scraping and polishing it was often wrapped in wet buckskin which, when dry, gave the bow added strength.

The bow of the present day archer usually has one curve and is from four to six feet long and made preferably of lemonwood -- a fine, straight grained wood of superior quality.

A six foot bow will be from three to four inches square in the center, tapering to from one and one-half to two inches at the nocks. The bow should be scraped entirely by hand, using, in the earlier stages, a steel and, later, a glass scraper. If carefully handled a block plane may be used in the earlier stages. Once the shape has been definitely started, care should be taken to see that the bend is in the middle of the bow. The back of the bow should always be flat with the outer wood worked in towards the flat side and the outer edge gradually rounded. The upper and lower nocks should be carved into the shape of horns and notched to hold the English linen bowstring. It is wiser to buy this as good bowstrings can be made only with considerable effort.

There are four general steps in bow making. First, decide which shall be the upper and lower limbs and the back. In a correctly proportioned bow, the lower limb is just a trifle stronger than the upper and is stiff in the center.

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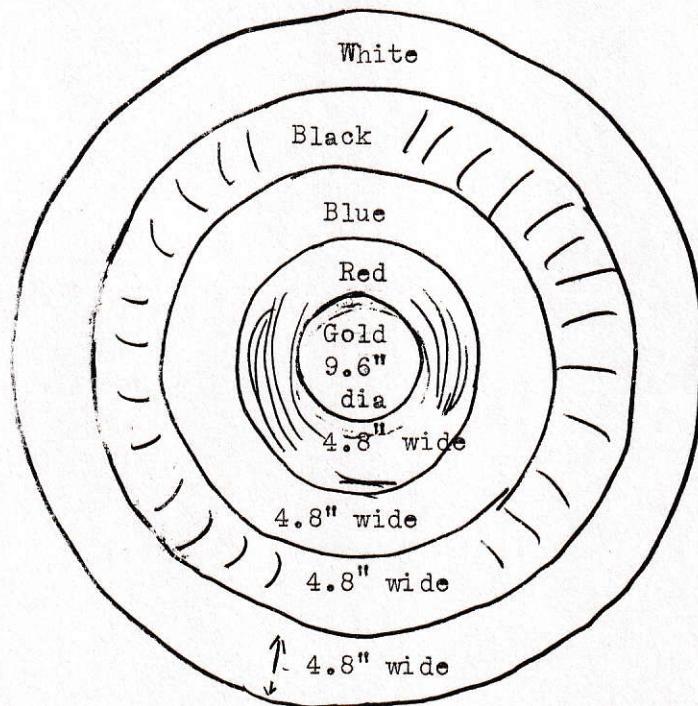
Second, work down the sides and work out the belly very roughly. Much care is needed in this early stage as the fibers are long, straight and very limber. It is easy to damage a bow by pulling one of these tough fibers if using either a jack plane or a draw shave. A spoke shave, if available, makes a very good tool as the blade can be set to cut very thin.

Third, start from the middle each way and scrape or use the spoke shave (no other tools should be used from now on), lay in the general contour of the bow, leaving the slope less pronounced from the middle towards both nocks.

Fourth, use No. 00 sandpaper followed by emery dust to make the bow at this step clear of any flaw, scratch or mark of any tool. The slightest nick at some future day may easily develop into a flaw. For finishing rub into the bow, inches at a time, boiled linseed oil, commonly called piano finish. This will develop a weather-proof coating far superior to varnish or shellac and have the same hard luster. It will not nick, crack or break until the bow itself disintegrates.

In selecting a bow the rule usually holds that the longer the bow, the harder the pull. From that, a six foot bow, properly built, will take the strength of an average 175 pound man. Start with a smaller bow and as your accuracy and strength develop, another bow built to your own size will be the result.

Diagram of Target



### POINT VALUE

Gold .....	9
Red .....	7
Blue .....	5
Black .....	3
White .....	1

NOTE: Cover target with old piece of canvas when not in use. Ask Mr. Cain.

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Tripod or butt is made from three pieces of wood 6 feet long which are joined at top by loose pin, so as to permit their being spread in tripod form. A hook should be placed on top of central leg and on each of outer legs at 3 feet 3 inches from top; these hooks hold target at proper height above ground.

Target is made of straw, or grass bound into rope 4 inches in diameter, sewed in spiral form into a flat disc a little over 4 feet across. Upon this is tightly stretched a canvas or oilcloth on which are marked colored concentric bands. The gold center is 9.6 inches in diameter; each of the bands if 4.8 inches wide. The values of the colors are -- gold 9; red 7; blue 5; black 3; white 1. The target should be mounted so as to incline backwards, to receive the arrows as nearly perpendicularly to its surface as possible.

In American generally only one row of targets is used.

Personal Notes: \_\_\_\_\_

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BIRD HOUSES-FEEDING STATION-PROJECTS

While on hikes gather up all sorts, shapes and sizes of twigs, branches, log ends, bark, moss, and other materials which the Troop will want on hand when starting a bird house project. It can be an excellent Patrol project as well as an individual project. The houses put up during the summer will be occupied by the time the next camping season comes around.

See Bird Study Merit Badge requirements.

Materials: Scrap box wood, rustic, tin cans, etc.

Tools: See list of equipment and their uses.

References:

Bird Study Merit Badge requirements

Indian and Camp Handicraft (rustic bird houses) by W. Ben Hunt

Dimensions: Birds are fussy about the size of interior and openings, also the height of the house from the ground.

Species (Birds of Owasippe)	Floor of cavity in inches	Depth of cavity in inches	Entrance above floor in inches	Dia. of entrance in inches	Height above ground in feet
Bluebird	5x5	8	6	1 $\frac{1}{2}$	5 to 10
Robin	6x8	8	*	*	6 to 15
Chickadee	4x4	8 to 10	8	1-1/8	6 to 15
Tufted Titmouse	4x4	8 to 10	8	1 $\frac{1}{4}$	6 to 15
White-breasted nuthatch	4x4	8 to 10	8	1 $\frac{1}{4}$	12 to 20
House wren	4x4	6 to 8	1 to 6	7/8	6 to 10
Tree swallow	5x5	6	1 to 6	1 $\frac{1}{2}$	10 to 15
Barn swallow	6x6	6	*	*	8 to 10
Martin	6x6	6	1	2 $\frac{1}{2}$	15 to 20
Song sparrow	6x6	6	()	()	1 to 3
Phoebe	6x6	6	*	*	8 to 12
Crested Flycatcher	6x6	8 to 10	8	2	8 to 20
Flicker	7x7	16 to 18	16	2 $\frac{1}{2}$	6 to 20
Red-headed woodpecker	6x6	12 to 15	12	2	12 to 20
Hairy woodpecker	6x6	12 to 15	12	1 $\frac{1}{2}$	12 to 20
Downy woodpecker	4x4	8 to 10	8	1 $\frac{1}{4}$	6 to 20
Screech owl	8x8	12 to 15	12	3	10 to 30
Sparrow hawk	8x8	12 to 15	12	3	10 to 30
Barn owl	10x18	15 to 18	4	6	12 to 18
Wood duck	10x18	10 to 15	3	6	4 to 20

Note: \* one or more sides open      () all sides open

Do not put perches on houses for wrens, bluebirds, nuthatches, woodpeckers or flickers.

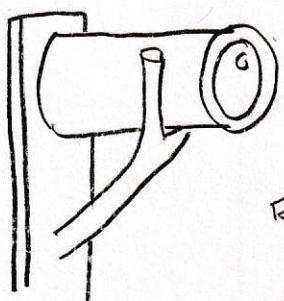
Be sure and drill a few small holes near top for ventilation and also few small holes in the bottom for drainage.

Use old weathered boards for roofs, floors or ends.

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HOLLOW LOG OR RUSTIC BIRD HOUSE IDEAS

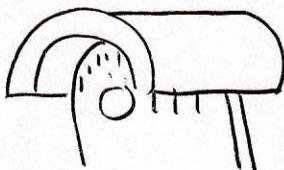
Look for log 6" or more in diameter - use inside - bevel gauge to cut away all rotted parts from inside of log.



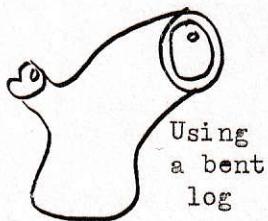
Horizontal  
log fastened  
to board



Vertical  
log fastened  
to board



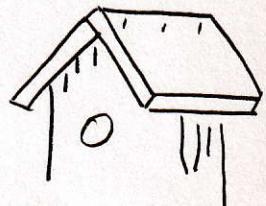
Half log roof



Using  
a bent  
log



A robin shelter  
from log 10" diameter  
or can be feed station



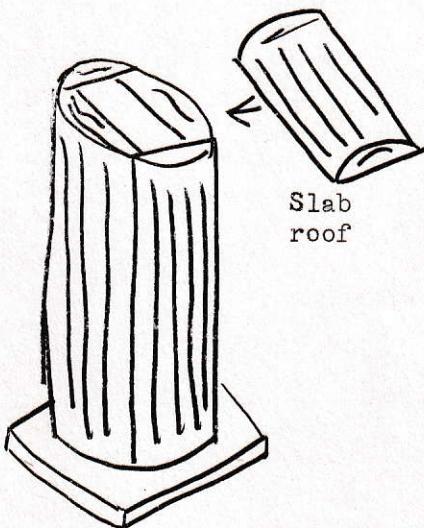
Gable board or  
slab roof

Put screws on bottom - makes for ease in cleaning

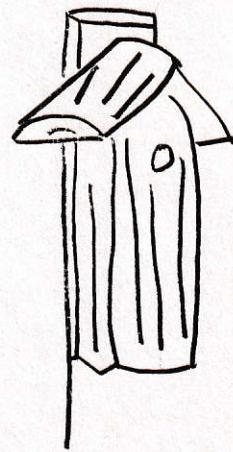
RUSTIC WOOD SLAB BIRD HOUSES



Top view

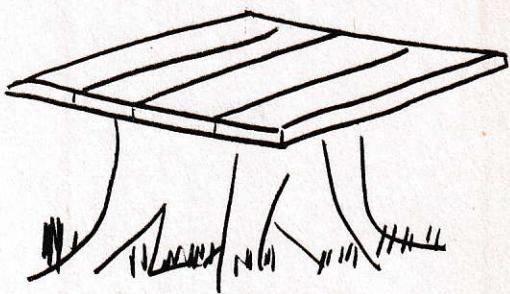
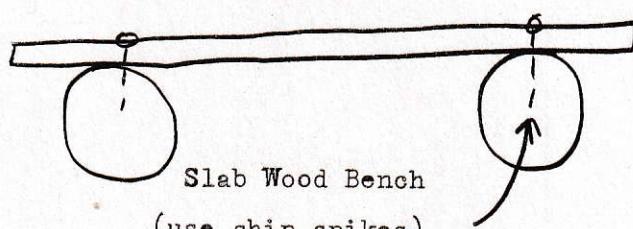
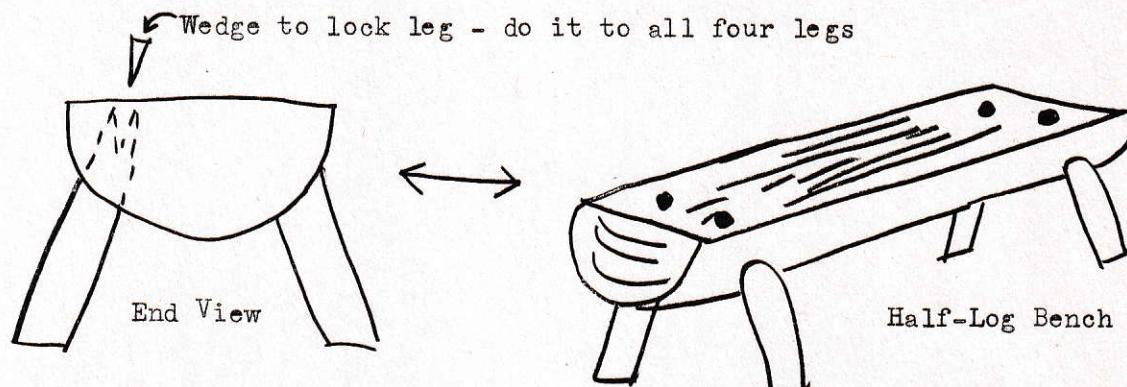


Slab  
roof

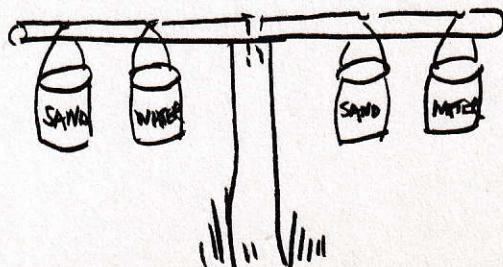
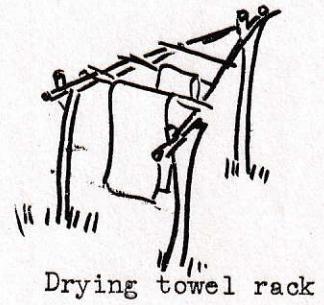
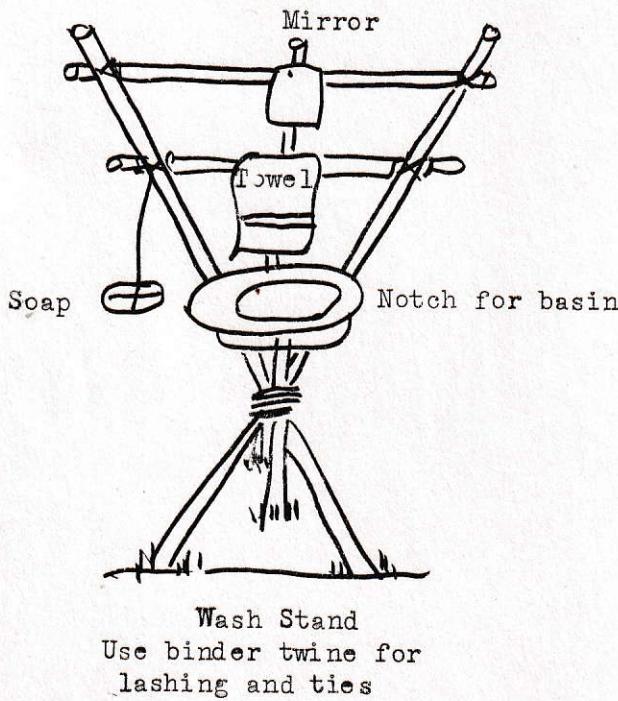


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SOME LARGE PROJECTS



CAMP SITE FURNITURE



Fire Buckets  
Made from #10  
can & wire painted  
red filled with  
water others with  
sand.

DO YOU KNOW WHEN TO USE WATER ON A FIRE  
AND WHEN TO USE SAND?

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"HORNCRAFT" - Is especially interesting and worthwhile having a decorative as well as a utility value - Indian Lore, neckerchief slides, etc.

Tools needed: Hacksaw; jack or Scout knife; rasps or files (half round and three-cornered); pieces of broken glass; sandpaper or steel wool.

### What to Do:

1st step - Clean up horn inside and out

2nd step - Examine the cow horn carefully and decide on the object which you intend making

3rd step - Mark the horn with pencil, designs, etc.

4th step - Clamp it at the edge of a table or work bench. Use a "c" clamp. Use a wire to judge depth of horn

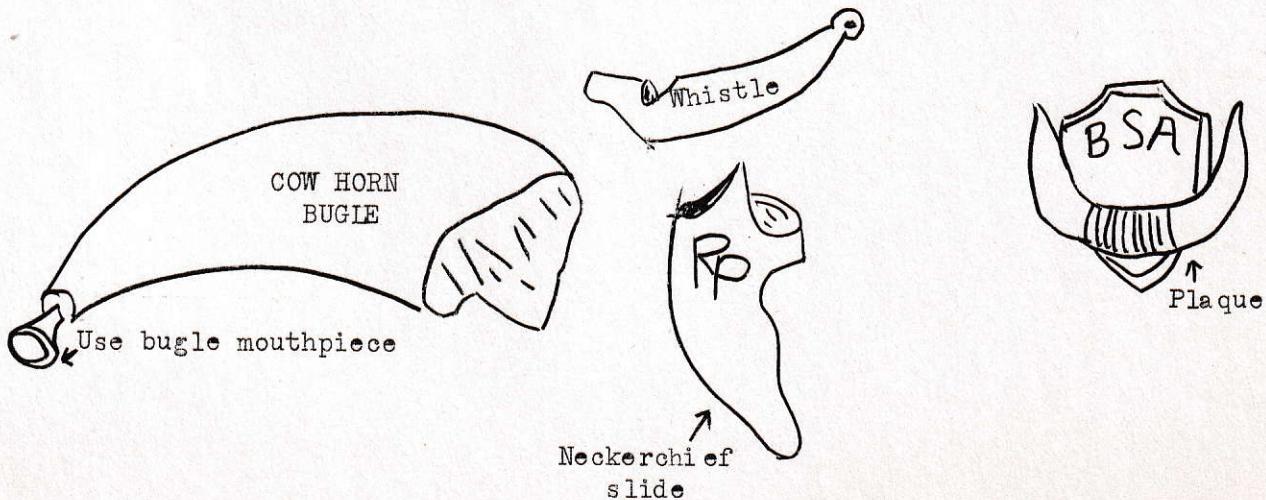
5th step - Then saw the horn to the approximate shape desired.

6th step - Use your files for smoothing and rounding edges and clean-out corners, rough spots may be worked on with your knife, then scrape with broken glass. Finish up smoothing with steel wool

7th step - Polishing with linseed oil or other oil and a soft cloth. Another method is to squeeze a bit of toothpaste into the palm of your hand, rub well into the horn until practically dry, and then polish with a soft cloth.

8th step - Decorations may be added with sharp nail, the end of a file or use a red hot wire - clean out groove - add enamel colored paint or leave as is.

### What to Make: - Here are just a few ideas



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### Leatherwork Merit Badge and Relative Leatherwork Projects

See references:

Merit Badge Pamphlet  
Craft Rating Skills of Explorer Manual  
Handicraft by Lester Griswold  
Woodcraft by Bernard S. Mason  
Indian and Camp Handicraft by W. Ben Hunt  
Fundamentals of Leathercraft by Ross C. Cramlet  
Leather Tooling and Carving by Chris H. Groneman  
Arrow Lacing Guide by John W. Dean  
How to Make Things with Craft Strip by Burgess Battery Co.  
How to Lace by R. W. Thompson  
Applied Leathercraft by Chris G. Groneman  
Fun with Leather by Joseph Loeming  
General Leathercraft by Raymond Cherry  
Leathercraft as a Hobby by Clifford Pyle  
Leathercraft for Amateurs by Eleanore E. Bang  
Working with Leather by Maurice H. Decker  
The Leathercraftsman by W. E. Snyder

Most of these are available thru the Chicago Public Library. Browse thru several. If any of the books arouse you, arrange for a summer loan - your responsibility.

Tools: - See List of Standard Equipment and their uses

Projects: - May come in "kit form" or to be made from undeveloped materials (scraps, etc.) Guidance is necessary in every instance. Use the four step method of teaching a skill. Keep it simple.

### LEATHER

Leather is classified in two ways, first by the animal it came from, second by the process used in tanning the hide.

Leather is obtained from the skins of cows, calves, horses, goats, sheep, kids and pigs. The game animals provide the deer, elk, moose and some smaller animals. The skins of alligators, snake, ostrich and lizard also add a variety to the leathercraftsman.

Cowhide - is produced from mature cattle, and is about the easiest leather to obtain in leather shops. The thickness of this leather varies according to the uses intended for it.

Some uses for cowhide are belts, knife sheaths, camera and brief cases, handbags or other articles that are to be decorated by stamping or carving.

Steerhide - is the top grain or thinned outer surface of the cowhide. Some of its uses are wallets, handbags, coin purses or any article that will be tooled or modeled.

Veal or calf skin - are young and half grown cattle. The leather is fine grained, smooth and light weight. It is used for billfolds, handbags and the like where tooling will be done.

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Horsehide - is a tough non-toolable leather used for garments such as vests, jackets, moccasins, shoes or gloves.

Pigskin - is a good leather with a grain not seen in any other leather. It is mostly used for gloves, sporting goods and some art work.

Sheepskin - is soft and porous by buffing is called ooze sheep. If finished on the hair side it is called a skiver.

Goatskin - is used for linings and fine leatherwork. Another name is Moroccos (after the Moors). This leather is used a lot in fine book binding.

Kidskin - is used for gloves and is the lightest leather (in weight) that can be bought commercially.

Genuine alligator or ostrich - is expensive and not so plentiful. It is used for fine luggage and bags. These leathers are often imitated and the imitation can easily be recognized.

### METHODS OF TANNING

Leather is tanned in two main groups; namely vegetable tan or mineral tan. The basic ingredient in vegetable tan is tannic acid and hides tanned by this method can be tolled, stamped or carved. In mineral tan the basic ingredient is a chemical, potassium bichromate, this leather has bluish color and cannot be used for tooling.

Chamois skins are made by a third process which softens the leather by working oil into it.

Finished leather is also divided into two forms; namely the "top grain" or splits.

The top grain is that part of the leather on the top or hair side of the hide. The split is the bottom or flesh side of the hide.

### TOOLS NEEDED FOR TOOLING OR CARVING LEATHER

1 piece of hardwood, plate glass or marble about 12" square	
Knife	Burnisher
Ruler	Spacing wheel
Small square	Punches
Sponge	
Modellers	
Stamping tools	

### CONSTRUCTION OF AN ARTICLE IN LEATHER

1. Cutting of leather
2. Tracing
3. Modeling tools (or stamping tools)
4. Coloring (if wanted)
5. Trimming
6. Skiving
7. Assembling
8. Lacing

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1. Obtain (or draw your own) design on a good piece of writing paper.
2. Cut your leather about 1/8" larger than the project requires.
3. Moisten the leather you will use for whatever your making. When the leather is moist enough, (not dripping or soaked full of water) lay the paper containing your design over it. With a tracer go over your design applying a bit of pressure, so as to make an impression on the leather.
4. When this is done remove design from the leather and begin tooling or stamping. All modeling tools should be held about at a 45° angle from your work.

Stamping tools can be bought or made from spikes.

In tooling run the tool along the outline of the design using the flat side of the tool. This will bring the design up to a relief. The backgrounds are then stippled from the right side.

5. If a design is to be colored it should now be done using analine dyes and using a brush to apply it. Each dye is applied separately when the other has dried. A protective coat of clear lacquer is applied to protect the leather.
6. The leather is now ready for trimming to the required size.
7. When two or more thicknesses of leather are to be put together it is necessary to thin the thickness of the edge.

This is done by using a sharp knife and laying the smooth side of the leather down on the cutting board. Put the knife at the proper angle and cut away the edge of the leather.

8. Leather cement is used on all inside edges to hold pieces of leather while the lacing takes place.

After the cement has dried, you are ready to lace the article. A ruler is placed on the leather 1/8" from the edge and a spacing wheel is run across the leather on all sides. These indentations are then used as guides in punching holes used in lacing. A round hole punch or a prong type punch can be used.

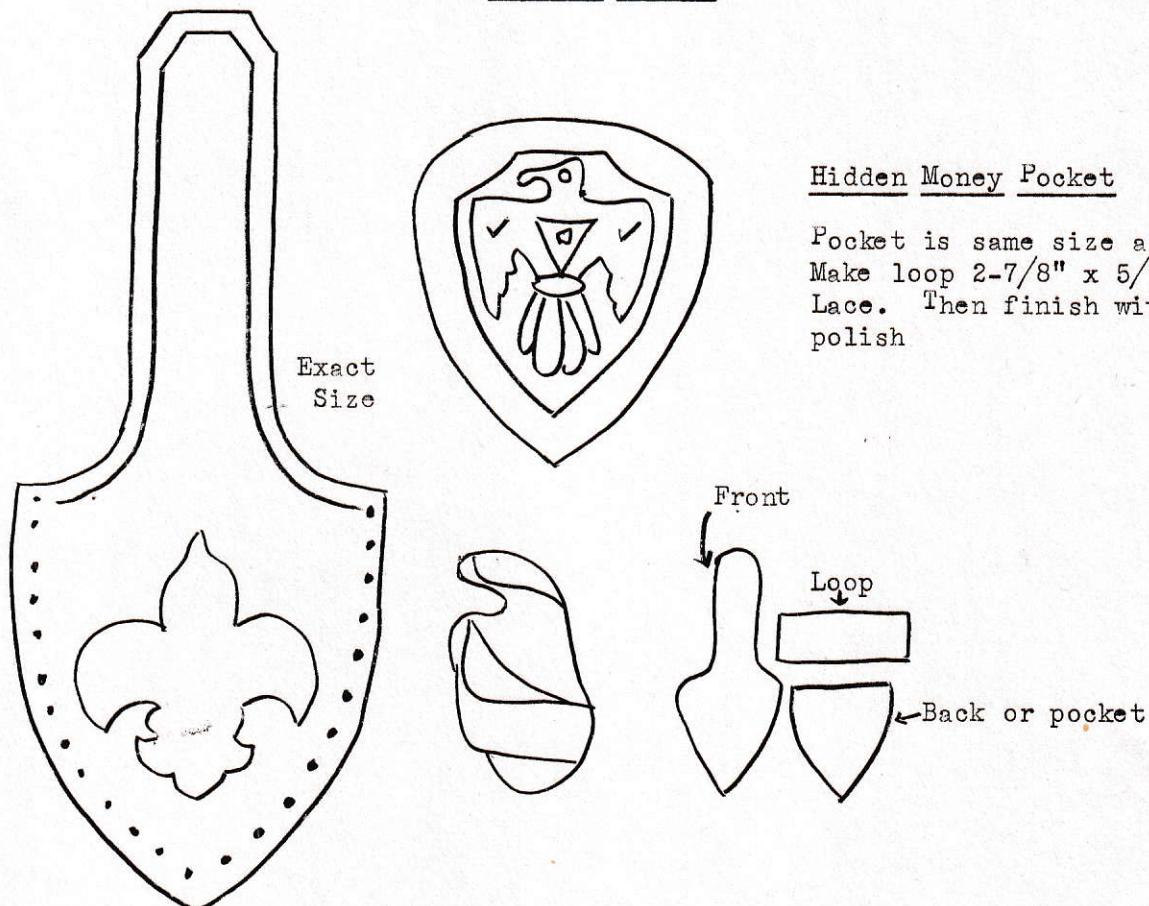
Lacing is a matter of taste. Any one of many types can be used by the handicrafter. Some of the different types are:

Over and over stitch	Single lay-over stitch
Buttonhole stitch	Florentine lace stitch
Triple edge stitch	4 plait round edge

When the lacing has been completed rub the lace with the smooth side of a mallet over the inside and outside surface of the lacing. This is done to smooth down the lace and thereby improving the appearance of your work.

Any scratches or dents on the work can be removed with a burnisher. You are now ready to polish the work. This is done to protect the leather from moisture, scratches, dents, or finger marks. The polish is applied with a soft rag, when dried it is polished with a block of wood covered with sheepskin.

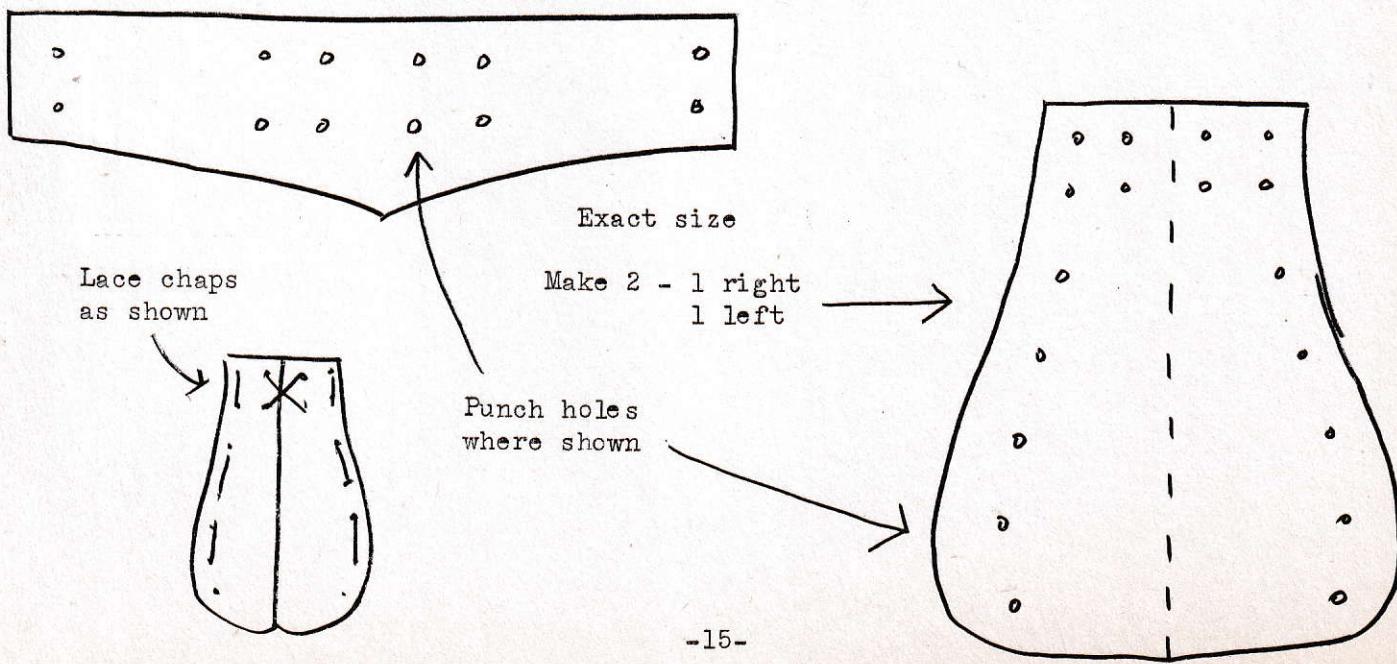
LEATHER SLIDES



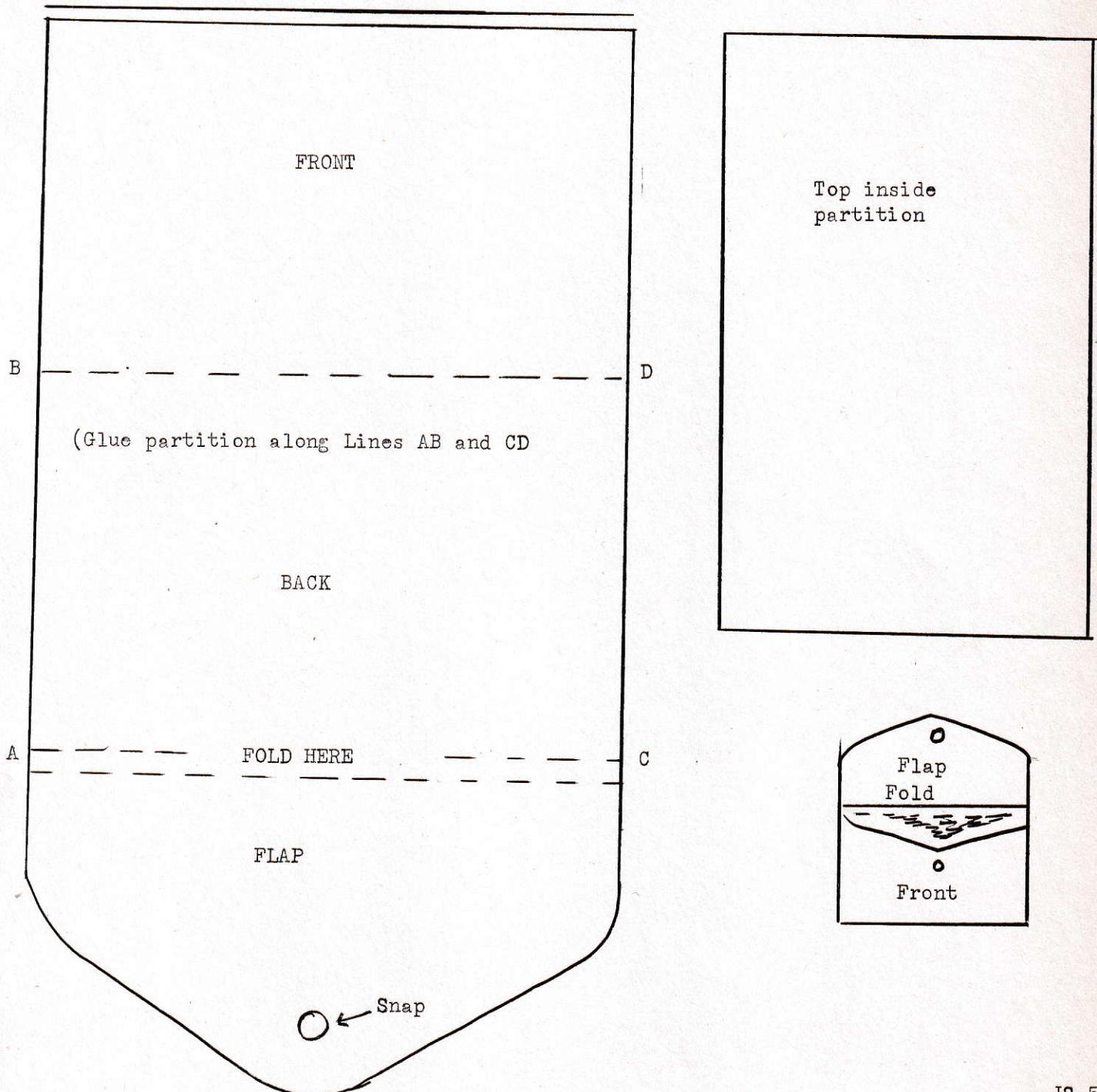
Hidden Money Pocket

Pocket is same size as front.  
Make loop  $2\frac{7}{8}'' \times 5\frac{1}{8}''$ .  
Lace. Then finish with brown  
polish

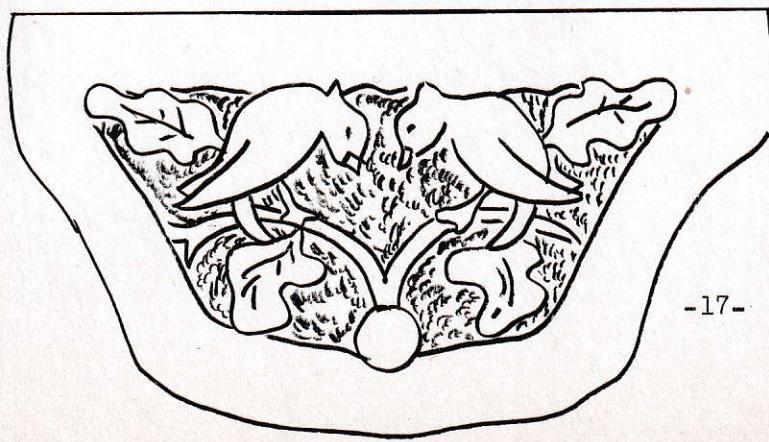
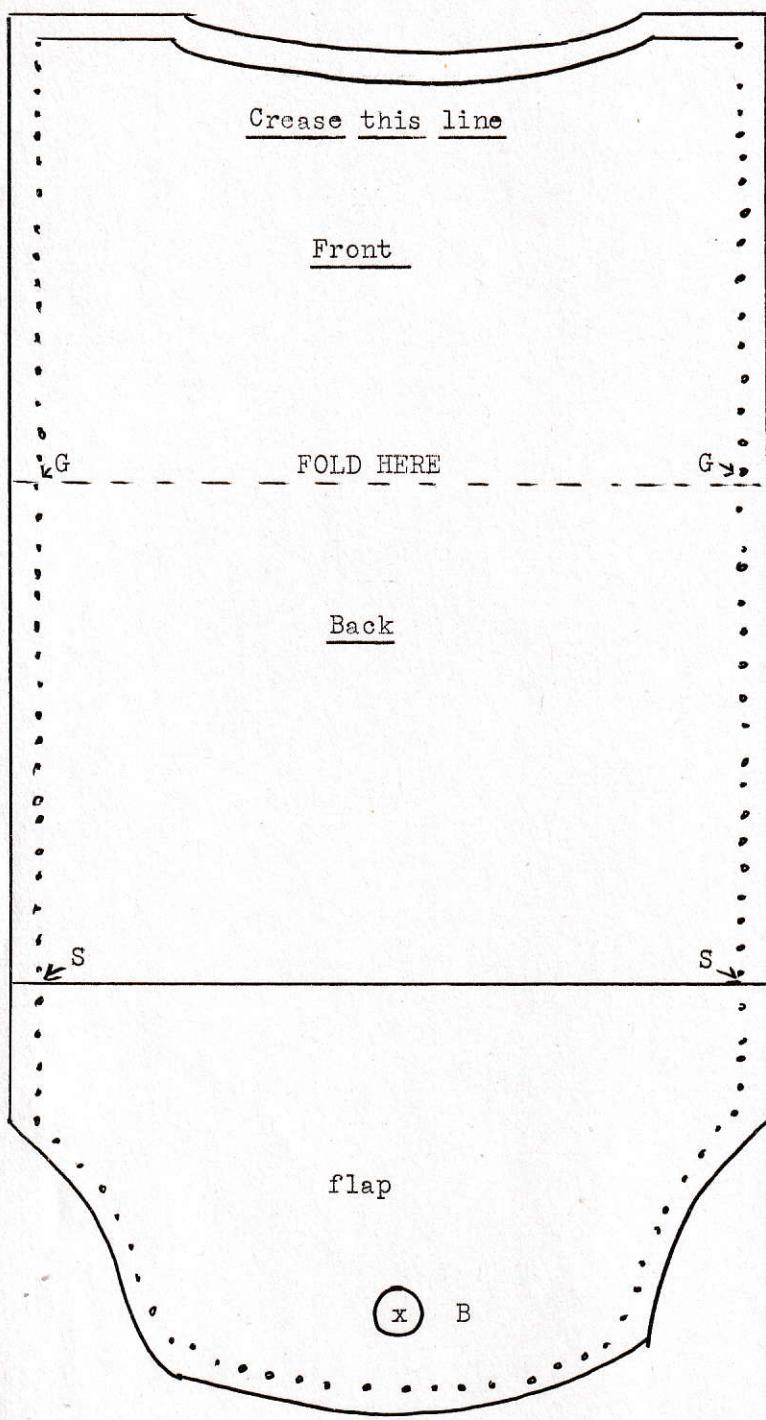
COWBOY CHAPS



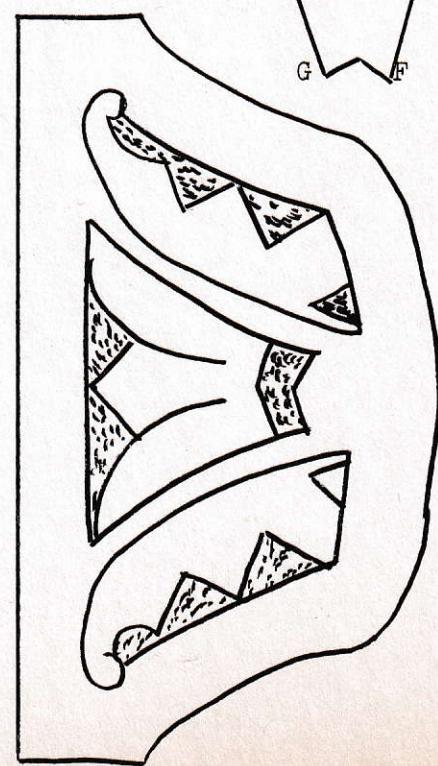
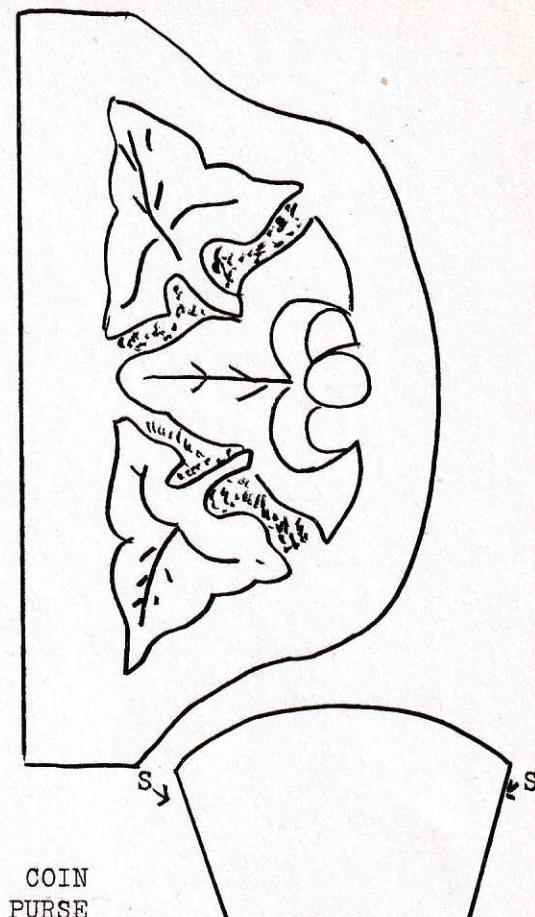
COIN PURSE



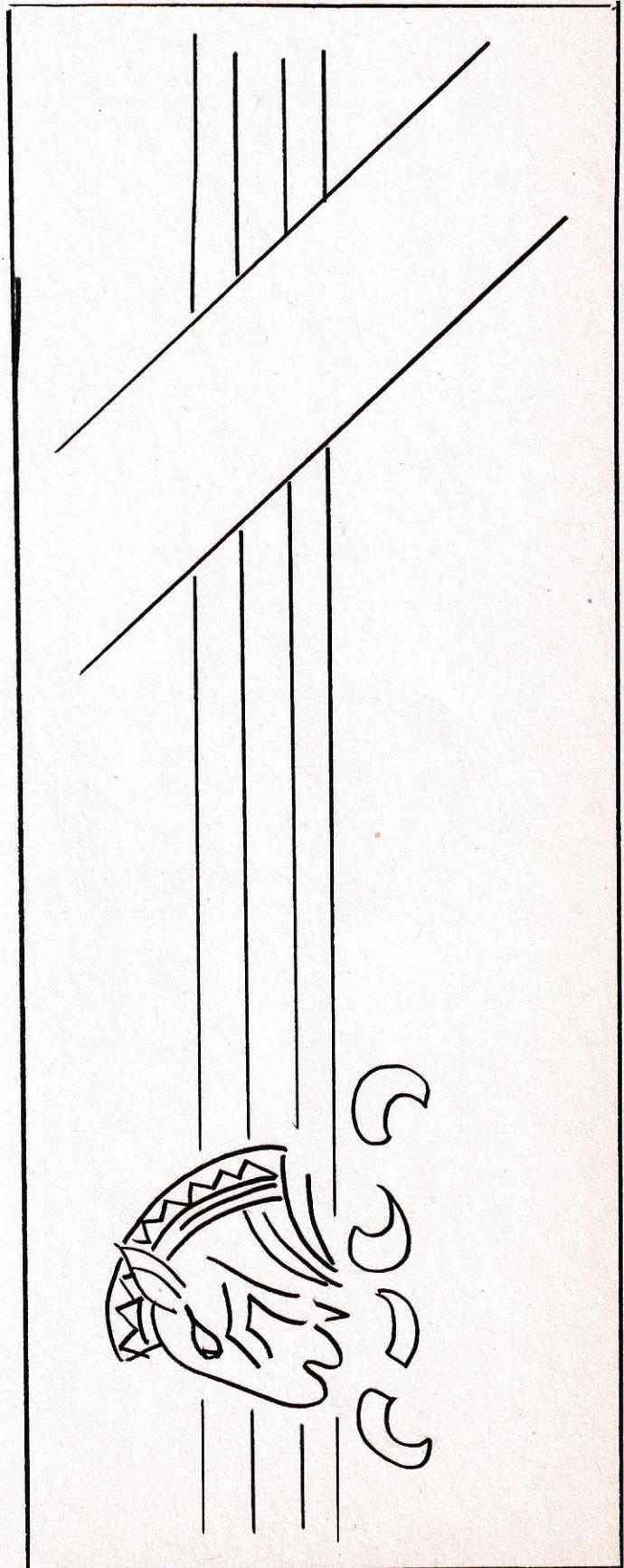
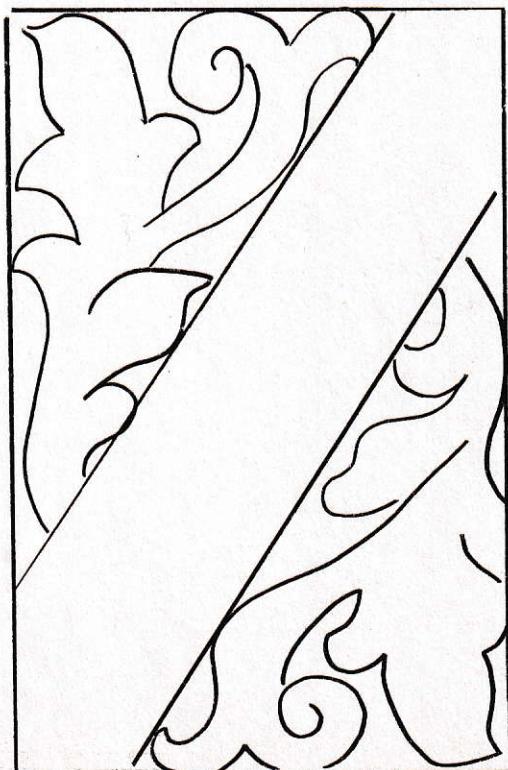
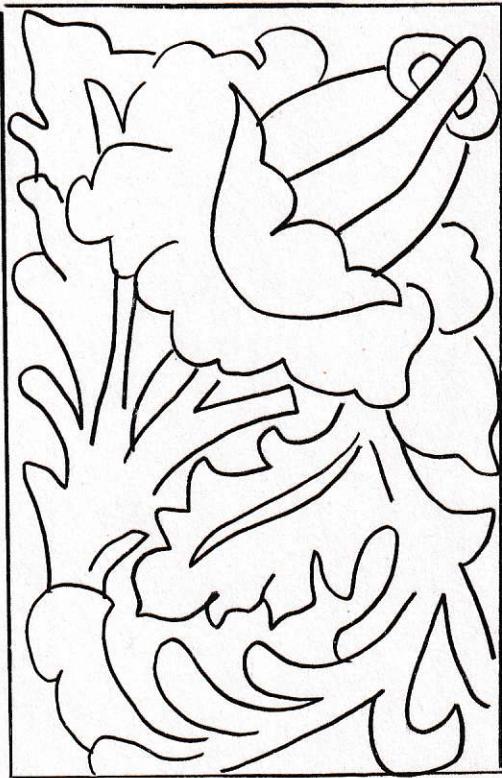
Glue the partition to the back, applying the glue along the side edges of both pieces. Put a button snap on the front of the purse. Punch all holes. Lace the edges. Finish by putting the other part of the button on the flap

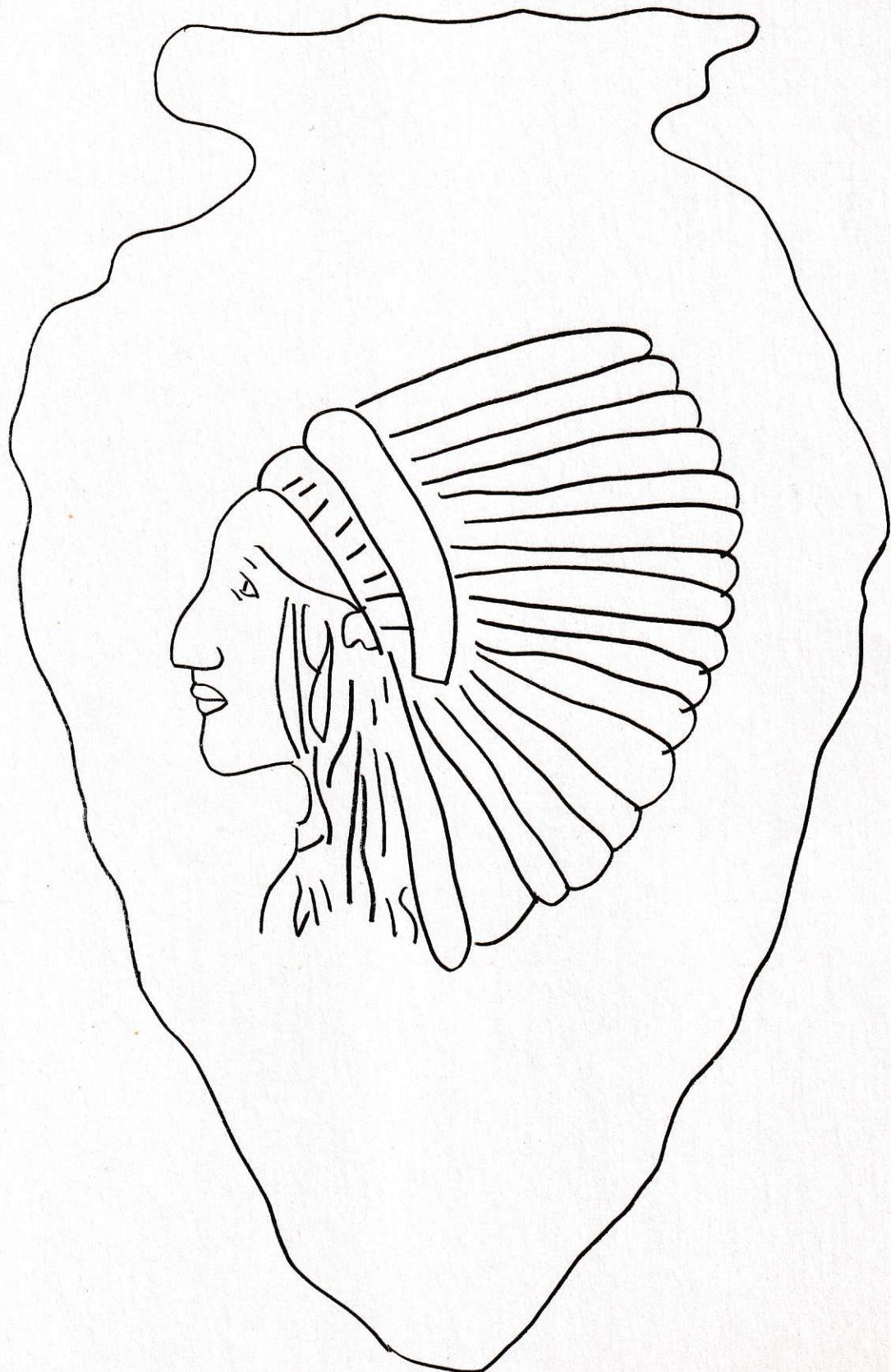


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JS-52



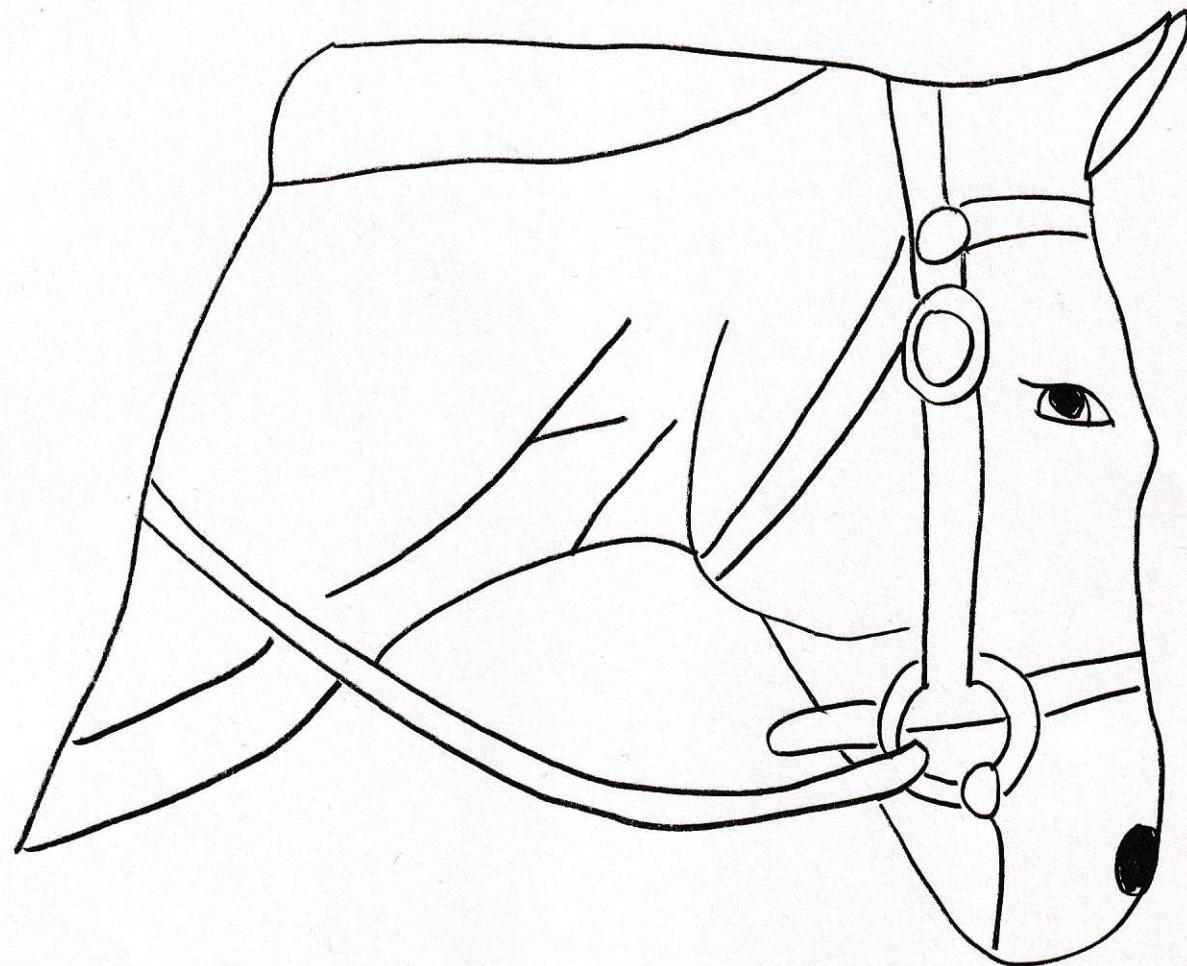


Uses:  
Leather tooling  
Woodcarving  
Metal Tapping



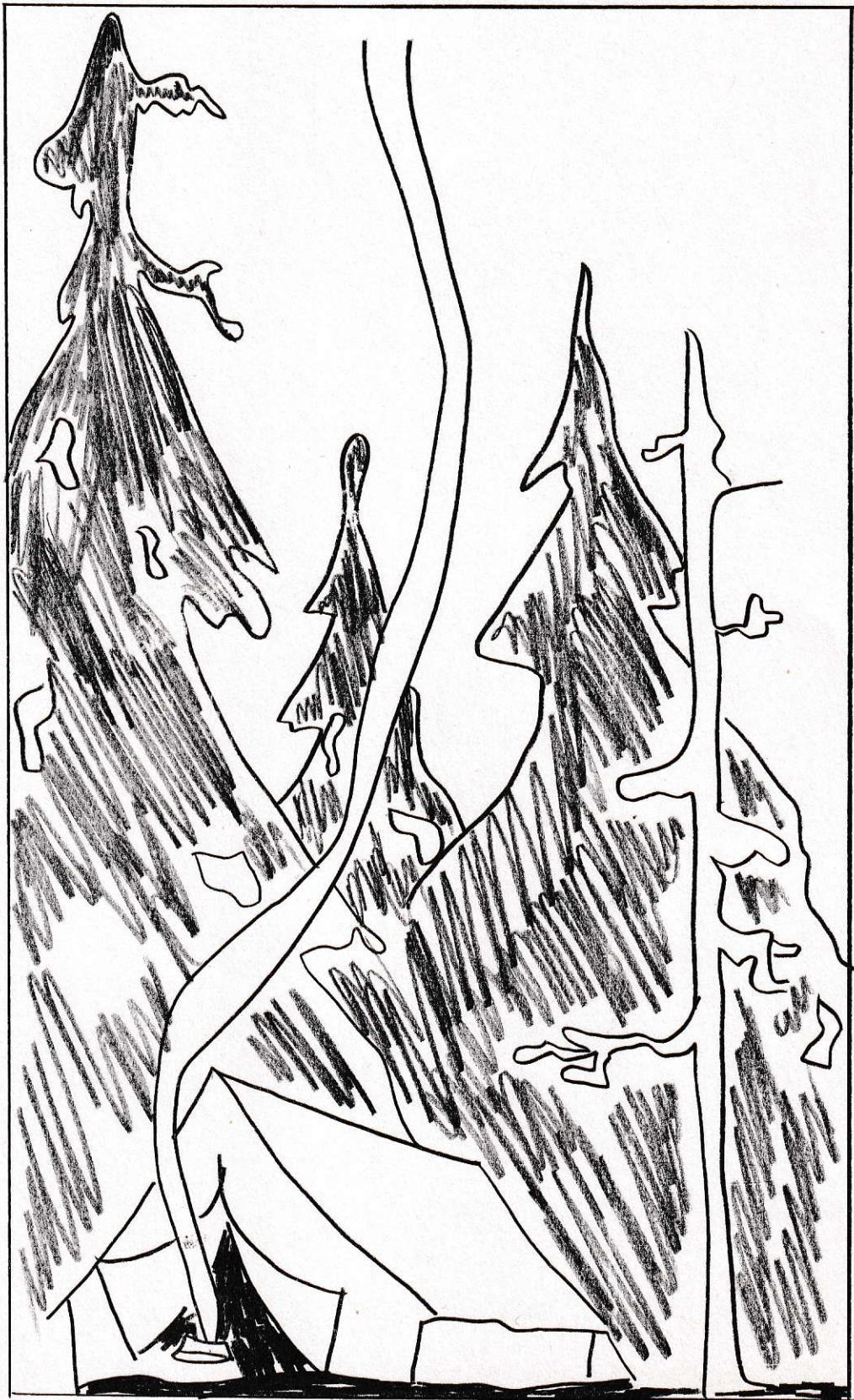
JS-52

Uses:  
Leather tooling  
Woodcarving  
Metal Tapping



JS-52

Uses:  
Leather Tooling  
Woodcarving  
Metal Tapping



Uses:

Leather Tooling, Woodcarving,  
Metal Tapping

## Craft Manual of Owasippe

### Indian Lore Merit Badge (Order of the Arrow assists)

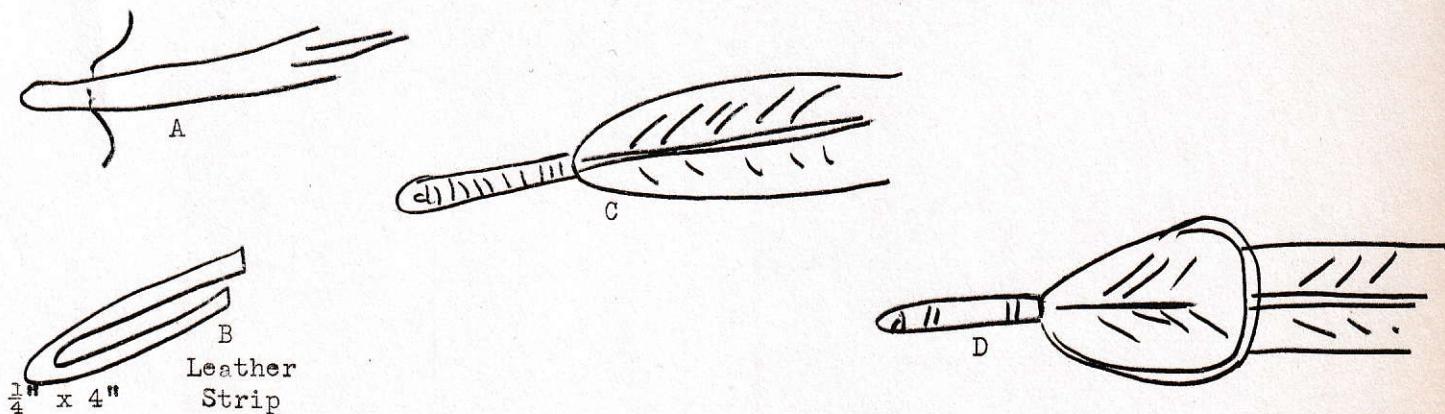
#### References:

Indian Beadwork (pamphlet)  
Indians of the Plains - Clark Wissler  
Indians of the Southwest - E. Pliny Earle Goddard  
Rhythm of the Red Man - Julia Buttress  
Book of Indian Crafts and Lore - Julian Saloman  
Indian and Camp Handicraft - Ben Hunt  
Indian Craft - Ben Hunt  
Book of Indian Crafts and Costumes - Bernard Mason  
Dances and Stories of the American Indian - Bernard Mason  
Handicraft - Lester Griswold  
Denver Art Museum, Department of Indian Art Leaflets  
Keye Foundation, Museum of American Indian Publications  
U.S. Bureau of Ethnology - Bulletins and Reports  
Indian Games and Dances with Native Song - Alice Fletcher  
Indian How Book - Arthur C. Parker  
Universal Indian Sign Language - William Tomkins

#### HEADDRESS OR WAR BONNET

The main in making a headdress is in preparing the feathers.

Bring a heavy thread through a feather near its base. See "A". Double a leather strip about  $\frac{1}{4}$ " x 4" and place it so as to form a 1/8" loop at the base of the feather. Wrap thread around the feather. See "B & C."

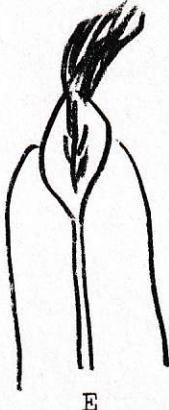


At the end of the leather strip place two or three fluffy base feathers. Tie them on with a couple twists of thread. Make the gread fast by sewing through the leather, see "D".

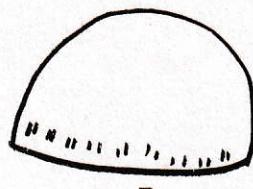
Pieces of colored felt  $1\frac{1}{2}$ " x  $2\frac{1}{2}$ " are used to cover the leather strip and the lower parts of the fluff feathers. Wrap the felt completely around the leather strip. See "D". Be sure the sewing is on the back side of the feather. Make a couple of wrappings around the felt covering with white wollen yarn. One at the bottom the other at the top. Use a clove hitch for finishing the strapping. See "D".

Craft Manual of Owasippe

Glue a fluff on the tip of the large feather with a drop of household cement and a small bunch of horse hair. See "E". Let dry.



E



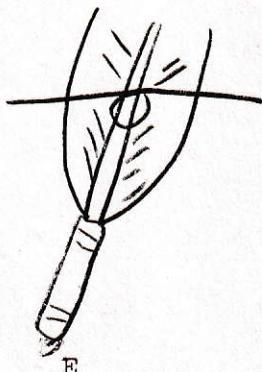
F

For the base of the headdress get an old hat and use the crown of. Cut out as Figure F.

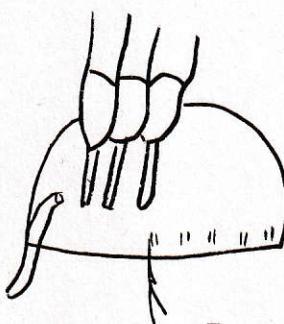
At this stage sew your beadwork to the bonnet base. Cut forty evenly spaced double holes about  $7/16"$  apart in the base.

Now lay out your feathers using the straightest for the middle; feathers with the sicker part to the right, toward the right, feathers with the wider part to the left toward the left.

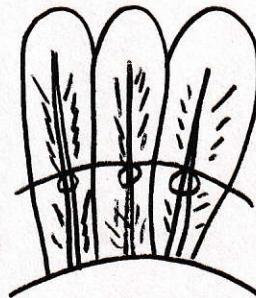
Make a slit sideways through the stem of the feathers at a mark of 6" from the base. Bring through these slits a leather lace about  $3/32"$  wide, five inches longer than double your head measurement. See Figure E.



E



F



G

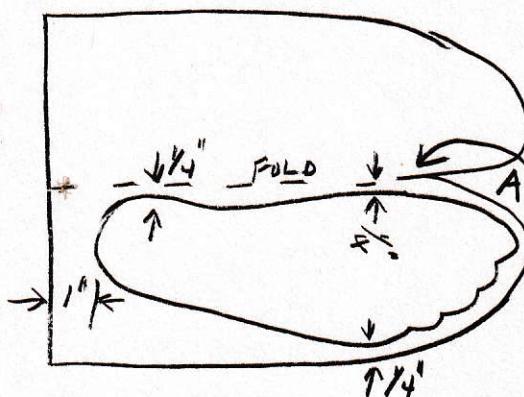
Lace the feathers into the base, front out, by bringing a leather lace, five inches longer than the measurement around your head, through holes in the base and through leather loops of the feathers. Start from the frong middle. See "F" and "G".

Tie the ends of laces with bow ties. Space your feathers evenly along the upper lace. Tie the jaw thong to each side. Attace decorations such as rosettes, ribbons, shells of feathers at tnds of bead work.

Craft Manual of Owasippe

MOCCASINS

Fold a piece of wrapping paper and place your foot on it. The instep of your foot should be  $\frac{1}{4}$ " from the fold. Draw a pencil line around the foot. Draw another line around the foot outline about  $\frac{1}{4}$ " outside of it. Draw a straight line down from the widest part down past the heel as shown.

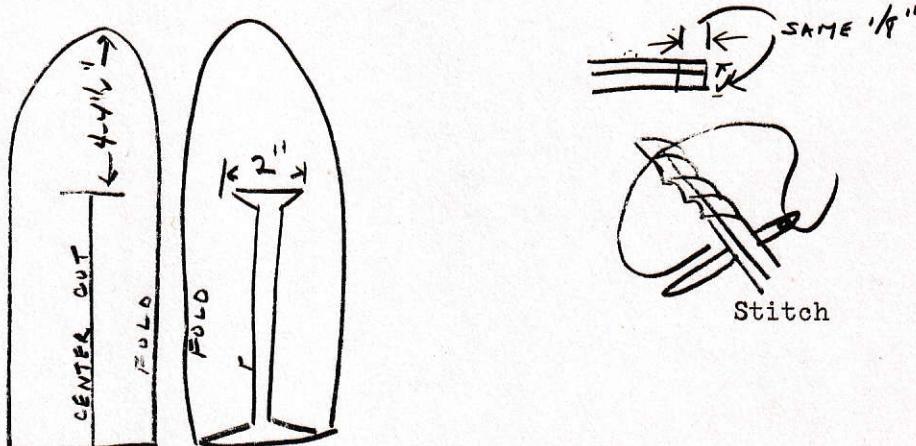


Cut out the pattern along the outer line. Make sure you cut out both halves alike. Leave one inch of leather beyond the heel.

Layout the pattern on the leather you will use in such a way as to get the most out of it. Mark the leather with a soft pencil on the smooth side. Cut out two halves.

Fold the leather, smooth side in for sewing. Use a strong linen thread and a blunt needle. Wax the thread well with bee's wax.

With an awl punch holes about  $1/8$ " apart, starting from the folded side. See "A". Keep the stitches even and pull each one tight as you go along. If your stitches are uneven they will show badly later on.



When the toe is completely sewed up, turn the moccasin inside out. The seam should now be on the inside. To smooth out this seam use a hammer handle or a piece of dowel rod.

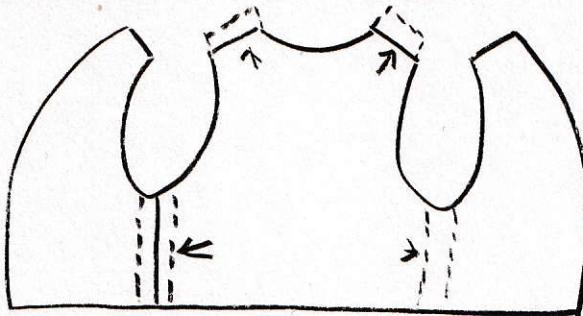
Lay out the leather as shown in "B" and mark it with a pencil. At this point, don't forget one becomes the right the other the left.

Craft Manual of Owasippe

VEST

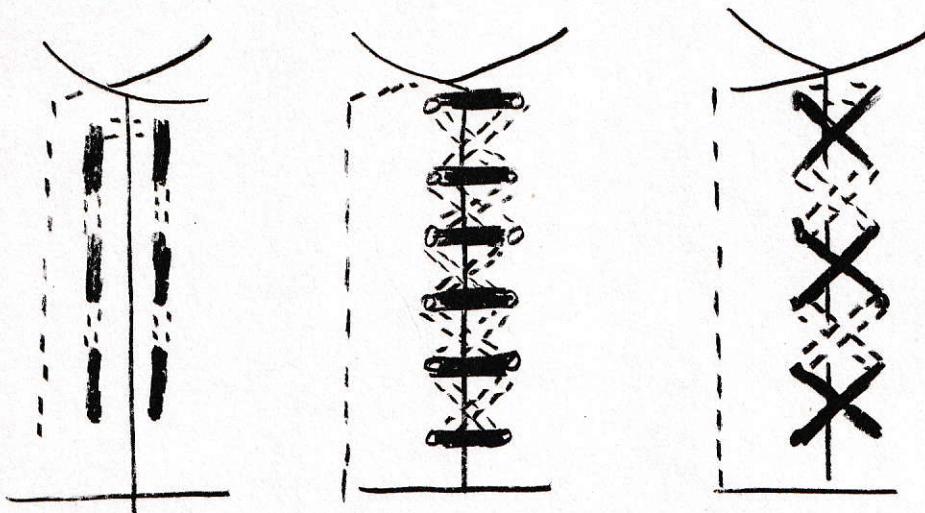
The vest can be made from cotton cloth, flannel, buckskin or leather. Patterns can be cut from measurements taken from a shirt which fits the wearer. Make three parts, one back, one right front and one left front.

In making the pattern only the back and one front need be made, if you remember to turn your pattern over for the other side of the front.



When cutting out the best from leather, don't forget to leave about 2 inches of leather at points marked for lacing together. After the cugging you are ready for the lacing. Start lacing under the arms first.

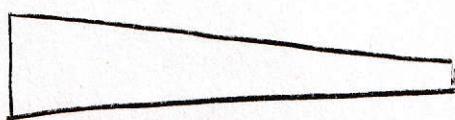
Types of lacing:



When the sides are laced up the next step is to lace the shoulders.

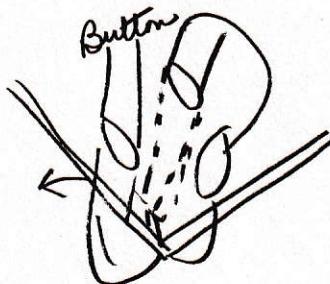
If pockets are wanted, cut leather to size of pocket wanted. Then lace to fronts.

Buttons can be made from scraps of leather. Cut out as illustrated.



## Craft Manual of Owasippe

After rolling the leather up, punch a slot in the roll. Illustration below shows how to mount on the vest.

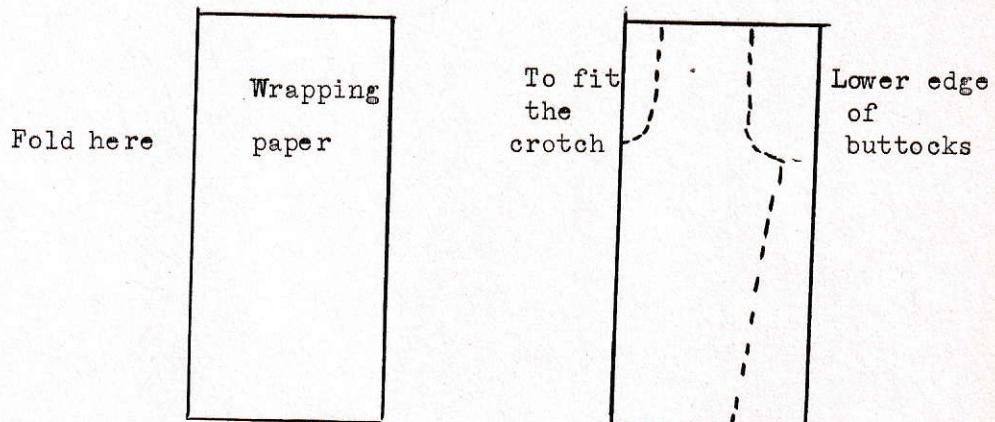


If fringes are wanted, the extra leather is first cut then laced in between the back and fronts and back on fronts of the shoulders. The length of fringe is a matter of taste to the wearer.

## LEGGINGS

Leggings were made of buckskin but with the coming of the white man they eventually started to use cloth, usually red or blue flannel.

To make a pattern for the leggings use a piece of wrapping paper. Fold it in half lengthwise. Draw a line in front toward the inside fold to fit the crotch, also a line in back to follow the lower edge of the buttocks.



Cut out the pattern and open it up. After laying out the pattern transfer to a heavy cutting flannel, suede, old blanket or buckskin. Provide a two inch (2) overlap on top for belt loop. Fit around the leg with pins to determine the location of the seam. Don't forget to reverse the pattern for the other leg.

The leggings can now be either laced or sewed depending on the material used.

The flaps of the leggings can be decorated with paint or beadwork, and the edges fringed.

## Craft Manual of Owasippe

### BREECH CLOUT

The breech clout is a strip of cloth about five or six foot long and twelve to eighteen inches wide trimmed with tape or ribbon and beaded. This is worn tucked between the legs and up under the belt, the ends hang like little aprons back and front.

### ARM BANDS

Arm bands can be beaded, quilled or made of tube beads. If tube beads are used, string them on leather thongs and each strand is held in position by strap leather spacers.

Thongs supporting the fluffy pendants are attached to the armband and may also be decorated with tube beads.

### DANCE RATTLES

These can be made from tin cans, turtle shells, gourds or rawhide. After the rattle is made decorate them with bright colors.

### NECKLACES

Necklaces are made from beads, bear claws, elk teeth. A good imitation bear claw can be made by carving them from wood.

### BREAST PLATE

Breast Plates can be made from corncob pipe stems on long tube beads. These are held in position by strap leather spacers, perforated to suit the maker.

### SLEIGH BELL BANDS

Sleigh bell bands are usually worn just below the knee or around the ankle at ceremonials. The bells are fastened to a leather strap, which can be tied, snapped or buckled together.

### DRUM OR TOM TOM

These can be made from a round box (wood or pulpboard). Soak two pieces of rawhide or sheepskin. Stretch it tightly over the top and side of the drum form. Lace the top and bottom tightly together and when dry decorate to suit yourself. A drum beater can be made with a piece of wood or dowel rod, with strips of cloth wrapped around one end. Cover this with soft leather.

### INDIAN FACE AND HEAD MAKE-UP

Theatrical make up is used to acquire the deep color of Indians. This color comes in liquid, powder or pancake form. Before applying the color, cover that part of the body to be colored with cold cream and rub this into the pores of the skin. Wipe off any excess amount of cream with a clean rag or even Kleenex. Liquid make up can be applied with the hands or a fine sponge, while powder and pancake make up with a puff. Cover all parts of the body that will not be covered with your costume in this manner.

Lining color or grease paints in stick form are next used to accentuate the detail painted on the face. Fine lines can be made with small orange sticks or a match.

In removing the make up after the ceremonial is over, again use cold cream or make up remover and rub this well into the skin. With a rag wipe off the make up. If not entirely removed, repeat the process again. Soap and hot water can then be used to wash off the rest of the make up.

Craft Manual of Owasippe

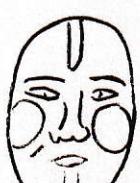
Indian Face and Head Make-Up



Yellow or  
Light Green



White  
with  
Red Outline



Cheeks red  
Blue on chin  
& forehead



Vermillion  
or  
Light Red



Red & White



Red - Green  
Yellow dots



Yellow & Red



Red & Black



Blue

TEPEE MODELS

The making of Indian Tepee Models is an interesting Patrol handicraft project which will take only two 15 minute sessions of your Patrol meetings.

Tools and materials amount to the following:

First Session: Two pieces of paper - one light, one heavy (for dimensions see fig. 1). Pencil, scissors, pin, colored crayons. Two toothpicks.

Second Session: Fourteen poles (golden-rod, reed willow, hedge wood, or sticks cut from any straight grained wood  $1/8"$  to  $3/16"$  in diameter, 3" to 5" longer than the distance between X and H in fig. 6). One home of same material 3" longer than the circumference of tepee (see fig. 7). Plenty of ordinary twine.

A

B

FIG. 1

Recommended size of pattern  
either 8" x 12" or 11" x 17"

FOLD A TO B

FIG. 2

FOLD C TO D

Up left to right

O Paper compass 9

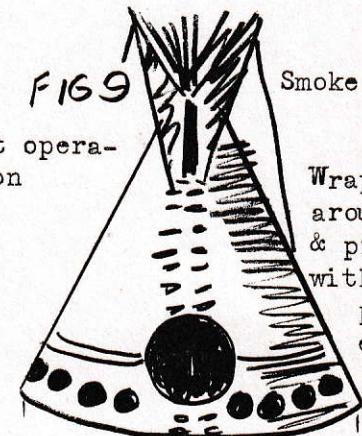
FIG. 3

Mark a line E to E  
using edge of  
paper as guide  
Now open last  
Cut half inch strip  
inch strip from top  
fold you made  
so paper is  
same as Fig. 2  
0 to 0  
Except Line  
E-E

Note: Dotted lines give relative  
proportion of base of tepee-hoop  
& frame finished.

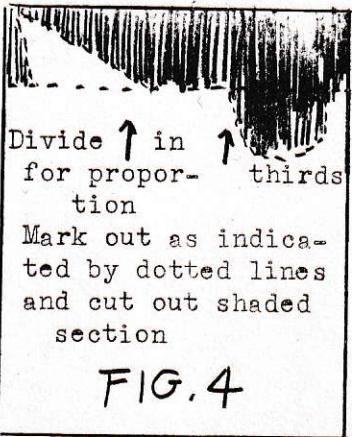
FIG. 9

Last opera-  
tion



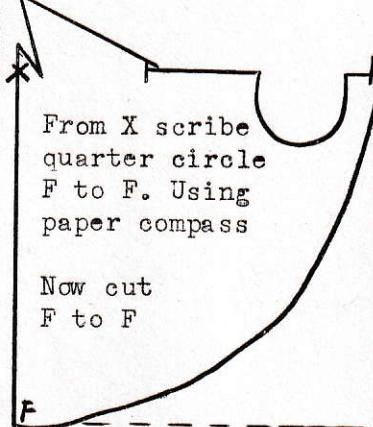
Smoke flap poles

Wrap cover  
around poles  
& pin together  
with tooth  
picks, &  
erect smoke  
flap  
poles



Divide ↑ in  
for propor-  
tion  
tion  
Mark out as indica-  
ted by dotted lines  
and cut out shaded  
section

FIG. 4



From X scribe  
quarter circle  
F to F. Using  
paper compass  
Now cut  
F to F

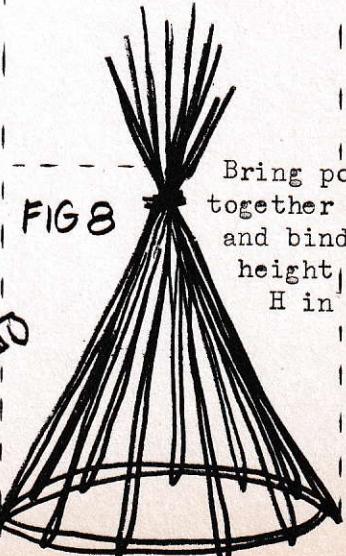
Slightly  
less than  
half of this  
on your com-  
pass will  
scribe cor-  
rect size  
of hoop



Splice here

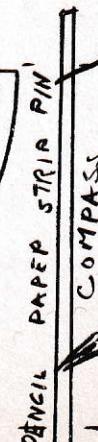
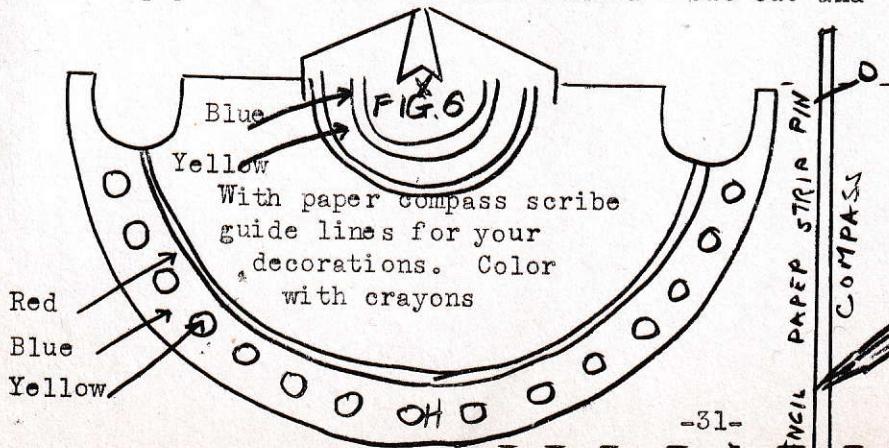
FIG. 7

Make hoop &  
lash poles  
securely with  
twine equal dis-  
tance apart  
to outside  
of hoop



Bring poles  
together in center  
and bind at  
height of X to  
H in Fig. 6

Now open pattern & carefully trace outline on  
stiff paper which has not been folded - cut out and



Craft Manual of Owasippe

Woodcarving Merit Badge  
and  
Relative Woodworking Projects

Reference Materials:

Second and First Class requirements  
Craft Rating Skills for Explorer Scouting  
Merit Badge Pamphlets  
Handicraft by Lester Griswold  
Woodcraft by Bernard S. Mason  
Jr. Book of Camping and Woodcraft - Bernard S. Mason  
Indian and Camp Handicraft - W. Ben Hunt  
Whittling and Woodcarving - E. J. Tangerman  
Designs and Figure Carving - E. J. Tangerman  
Whittling - W. Ben Hunt  
Woodcarving - John Lacey  
Audubon Book of Bird Carving - John Lacey

Most of these are available from the Chicago Public Library. Ask about a summer loan. Show the librarian your contract as identification.

Tools - See List of Standard Equipment for Craft Lodge and their uses.

Note: Many of the projects will come in "kit form". Many projects will have to be developed from scrap lumber, slab lumber, etc. also from leather hides, cow horn, etc.

In every case guidance is necessary. Use the four step method of teaching craft skills.

Do not expect too much. Keep it simple.

(Good story telling material for around a Troop campfire)

Woodcarving is one of the oldest forms of art known to man. It was practices in almost every part of the civilized as well as uncivilized world but it's greatest advance was in Europe due to the church's influence.

With people migrating from place to place in the world, the art eventually came to this country with our early settlers. The art since has been kept alive by being handed down from father to son.

With the coming of modern machinery and the speed with which they produce. Only the appreciation of handiwork, the beauty of original design and the joy of creating has kept woodcarving alive.

Whittling has no written history but is the outgrowth of man's desire to decorate everything he handles.

The term "whittling" came to mean that branch of carving with a knife that deals with stunts as chains, ball in the cage fans and the like.

Craft Manual of Owasippe

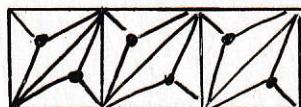
Chip carving is another form of decorating wood and probably the most fascinating. This type of carving was practiced by the natives in the South Sea Islands and also appeared in Europe particularly in the Scandinavian countries. How two groups of people in different parts of the world worked on the same type of carving is a mystery. The question arises who had it first. Your guess is as good as anybody else's.

Chip carving designs are made by repeating simple triangles, circles or parts of a circle. So to familiarize you in the art I have drawn a few designs that can be laid out on a wood box (fancy cigar box) picture or mirror frame or anything that is flat.

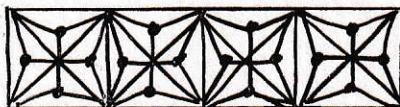
The main thing to remember about chip carving is that the design is always repeating over and over again for as long as you want.

The dot in the design represents the tip of the triangle. (The lowest part when carved in the wood).

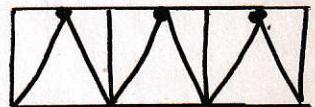
1



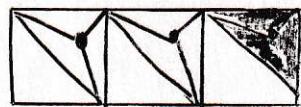
2



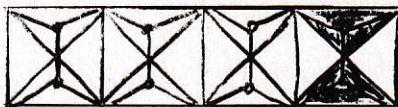
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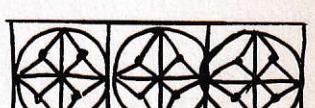
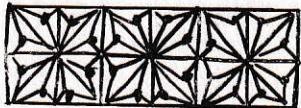
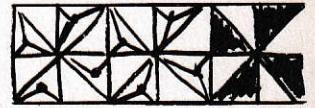
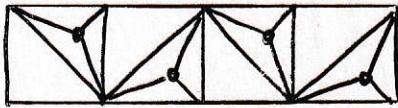
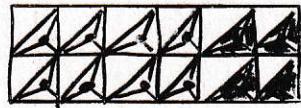
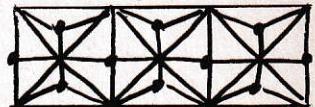
4



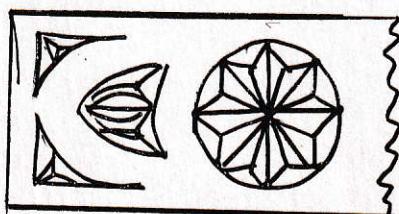
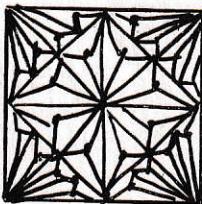
5



6



Part of a circle



Triangle on arcs of circle

## Craft Manual of Owasippe

### WOOD

Wood is classified commercially as hardwood or softwood, but not necessarily based on hardness.

The hardwoods are:

apple	birch	mahogany	walnut
ash	chestnut	maple	willow
aspen	elm	oaks	
basswood	gum	poplar	
beech	hickory	sycamore	

The softwoods are:

cedars	junipers	spruce
cypress	larch	tamarack
fir	pine	yew
hemlock	redwood	

All woods have both heartwood and sapwood.

The sapwood is that part of the tree just below the bark of the tree. The heartwood is the center of the tree. It is usually darker in color than the sapwood.

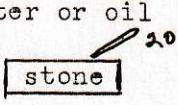
A word about woods to use for carving. Always keep in mind the type of carving you are going to do so as to pick the best wood for the job.

A simple or large piece of work requires a fairly open grained wood. Complicated or delicate work a close grained wood. Figure work (statues) a hardwood.

### KEEPING YOUR TOOLS SHARP

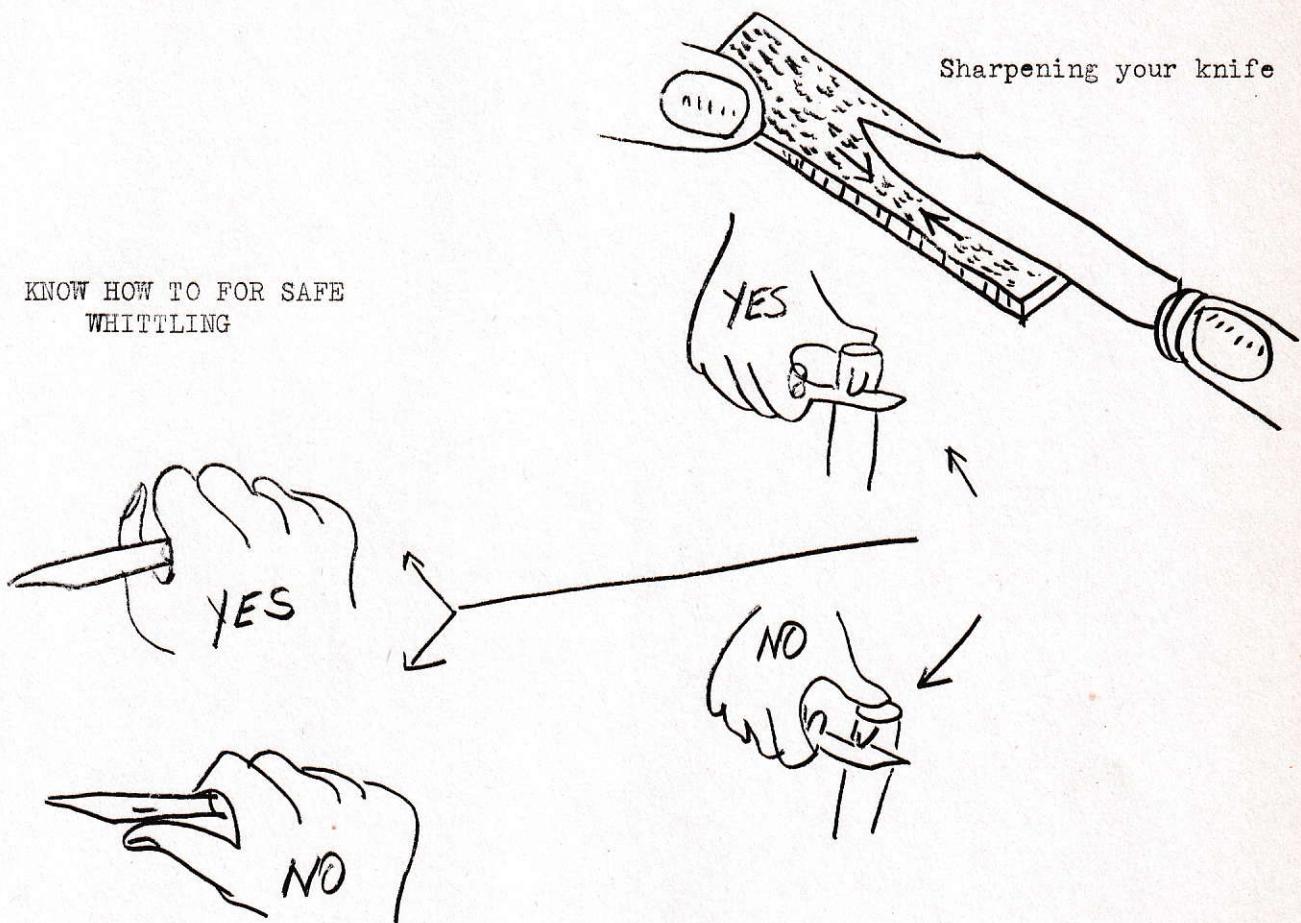
1. The Scout Knife - a dull knife is dangerous because it tends to slip off of the wood, while a sharp knife bites into the grain.

The KNOW HOW for sharpening a knife.

- a. Place sharpening stone on a level surface
- b. Wet the sharpening stone with a little water or oil
- c. Place blade of knife flat on stone  
Raise back edge about width of blade or   
Keeping cutting edge on the stone
- d. Move knife back and forth - apply pressure when you pull it toward you for 3 or 4 strokes. See diagram
- e. Turn the blade over and repeat #4
- f. Finish off (#4 and #5) on leather sole of your shoe.

Craft Manual of Owasippe

KNOW HOW TO FOR SAFE WHITTLING

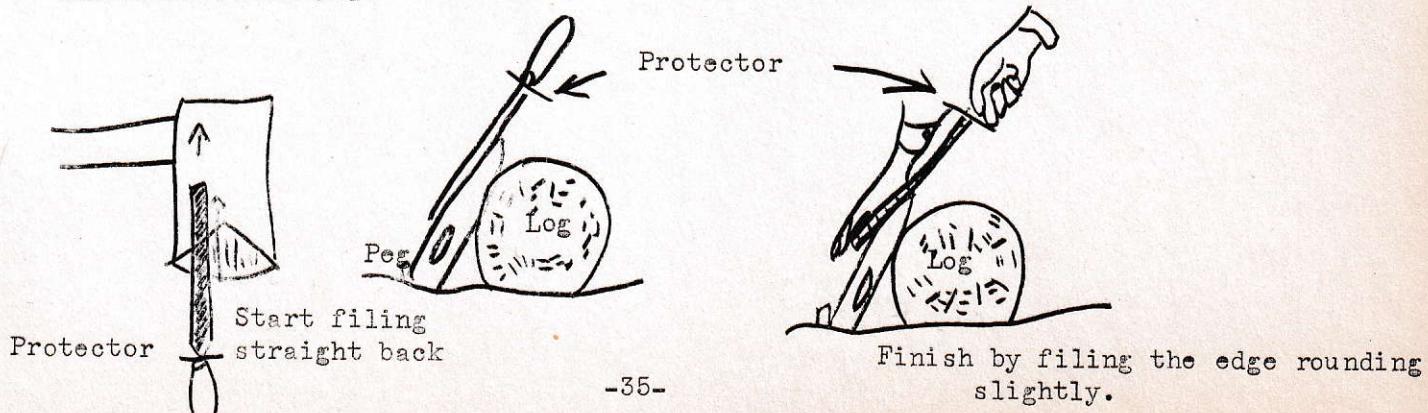


2. The axe - keep it sharp, it will cut into the log but a dull one often glances off and in to you.

A loose axe head is also dangerous. Three ways to tighten it.

- Tighten take up screw or metal wedge
- Fashion a new wedge from piece of hardwood. Drive it in tightly and cut it off.
- Soak in bucket of hot water for 20 to 30 minutes then if the axe head doesn't hold, turn into Owasippe Office c/o Program. Be sure your CAMP COLOR is on it.

Sharpening your axe - See Handbook for Boys - BSA. File method



## Craft Manual of Owasippe

Warning - use wood or metal protector to protect your thumb. Hold the file level with the blade of the axe and begin filing the flat of the blade, one-half inch from the edge. From this point file away the flat of the blade to a point about three inches back from the edge.

Work for the fan-shaped effect shown at left above.

File only on forward stroke, lifting the file clear of the axe on the return stroke.

Reverse your axe and proceed with the other side.

Finish off with sharpening stone.

## ARTICLES FROM WOOD (Small Projects)

### 1. Knife Craft (Carving-Whittling) Possible order of difficulty.

#### Keep tools sharp

##### A. Elementary projects

Fuzz stick  
Squashed stick  
Founded stick  
3 sided stick  
Dowels  
Tent pegs  
Toasters  
Wedges  
Tags or signs  
Bird houses - simple

Simple neckerchief slides  
Pot hooks  
Candle holders  
Coat hangers  
Pancake turners  
Paper knives  
Forks & spoons  
Designs - such as square - oval  
oblong - triangle - heart  
shape

##### B. Intermediate projects

5 sided sticks  
Octagonal sticks  
Pen holders  
Paper weights  
Shinney or hocky stick  
Canes  
Salt shakers  
Inkwell stands

Stools  
Tool handles  
Miniature totems  
Rustic work  
Neckerchief slides  
Designs - such as star - arrowhead -  
cube - pyramid - cone

##### C. Advanced projects

Fire-making set  
Canoe paddles  
Neckerchief slides  
Totem  
Book ends

Boomerangs  
Scout Badge  
Chip Carving

##### D. Expert Projects

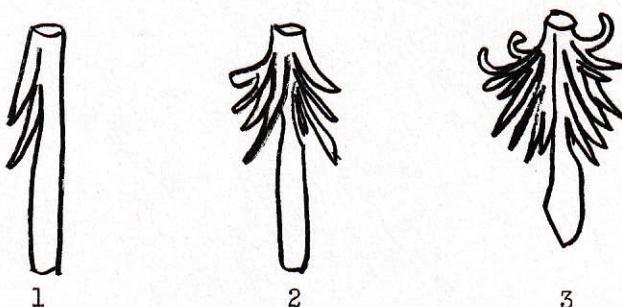
Bow and arrows  
Puzzles - loose ball,  
chain, hourglass, pliers

Oddities  
Indian Heads  
Models - log cabin, boats  
Bas Relief work

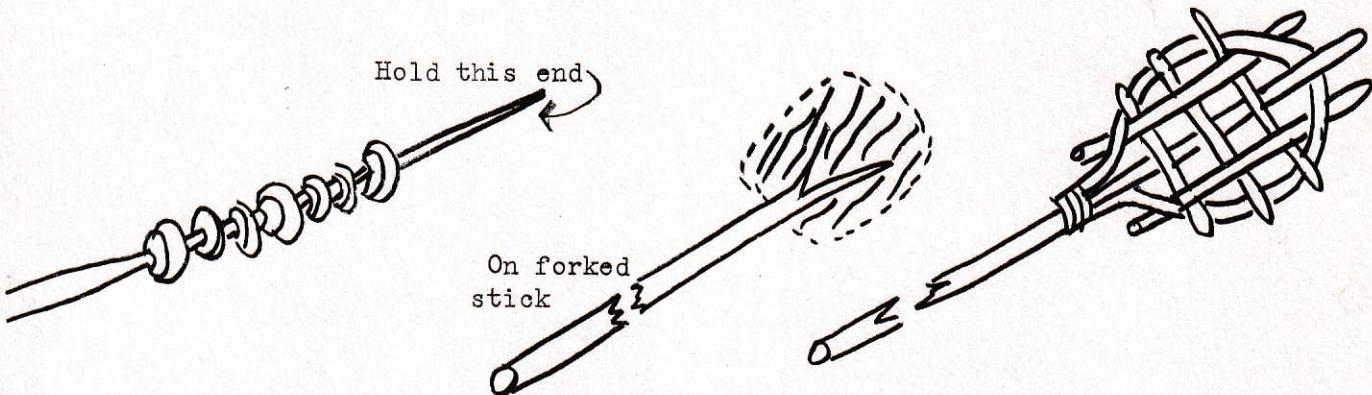
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Diagrams - Articles from wood (simple projects)

Three steps in the making of a Fuzz Stick

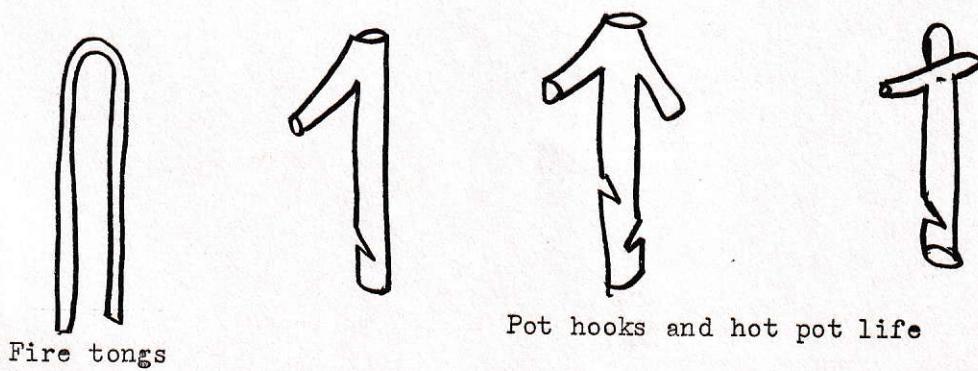


Broilers or Toasters - use peeled green sharpened sticks. Size of a tennis racket.



Beware of the wood you use; Taste the bark, if bitter, you'll have a bitter meal  
Avoid most nut-bearing trees including oaks, except beech it is okay  
Use maple, elm, ash, sassafras, basswood, apple, ironwood, etc.

THAT'S RIGHT - KNOW YOUR TREES



Pot hooks and hot pot lifts

Fire tongs

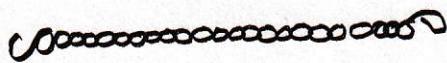
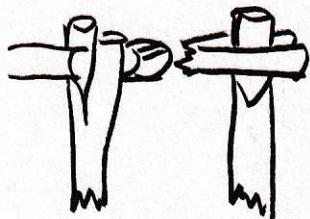
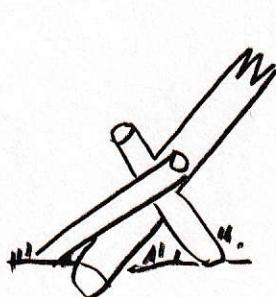
Notch should be on same side as the fork. Note that wood is cut off just above the fork. Where forked sticks are not available, use a straight stick and drill hole with Scout knife and insert a peg.

Turn pot hook upside down for hot pot lifts.

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When camping in a place where we are not permitted to cut forked stricks or where it is unwise to cut them because of the damage to the trees - then

TRY THESE IDEAS:



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NECKERCHIEF SLIDES (wood)

A few ideas to get you started - let's develop your own

CHIEF OWASIPPE SLIDE

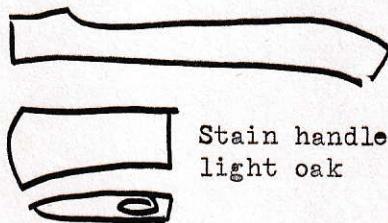
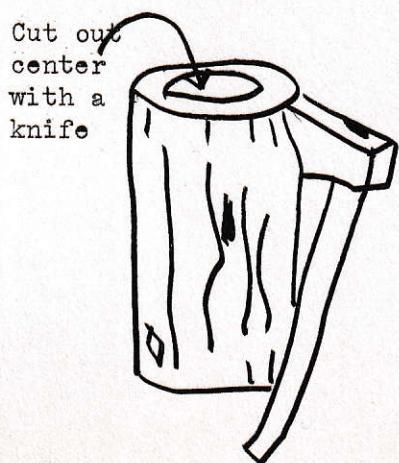


Front View



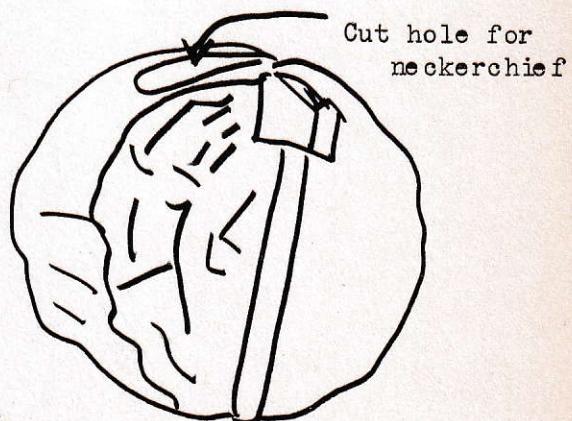
Side View

AXE IN A LOG



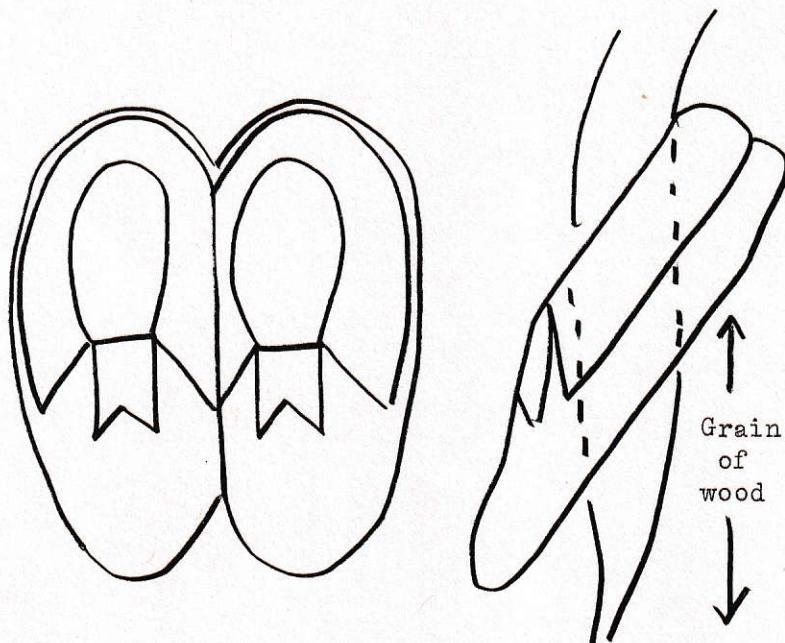
Stain handle  
light oak

Paint head of axe  
black or aluminum  
Glue axe into log  
Material: 1 piece about  
 $1\frac{1}{2}$ " or  $2\frac{1}{4}$  long  
Use "dead" limb  
of a tree



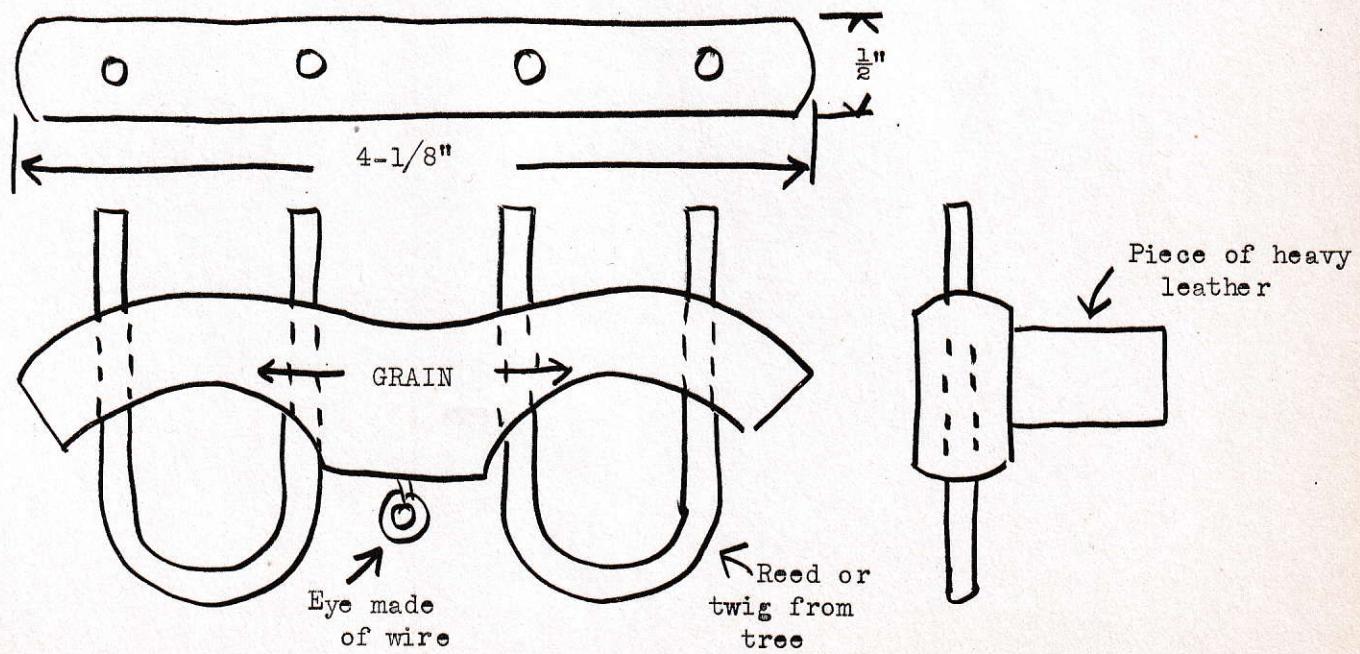
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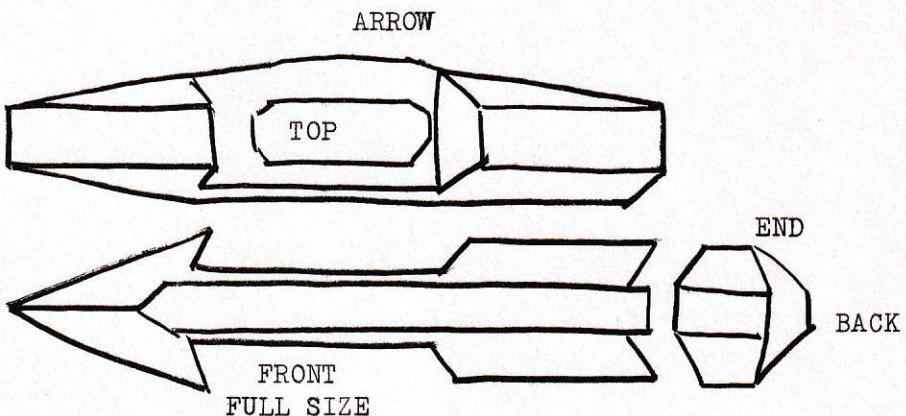
SIOUX MOCCASINS



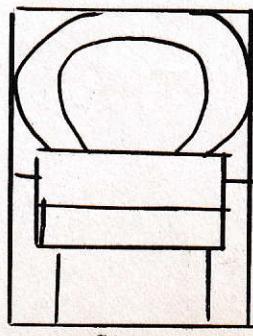
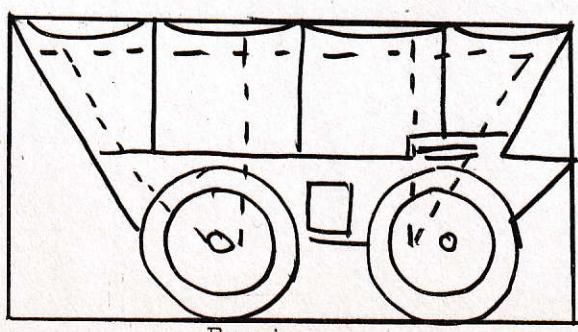
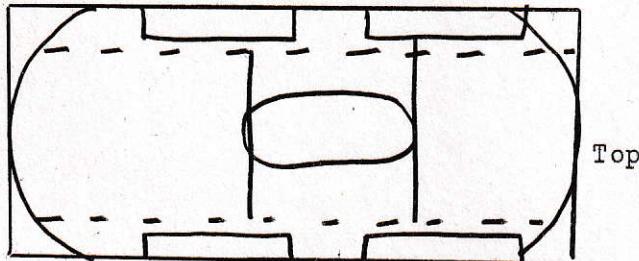
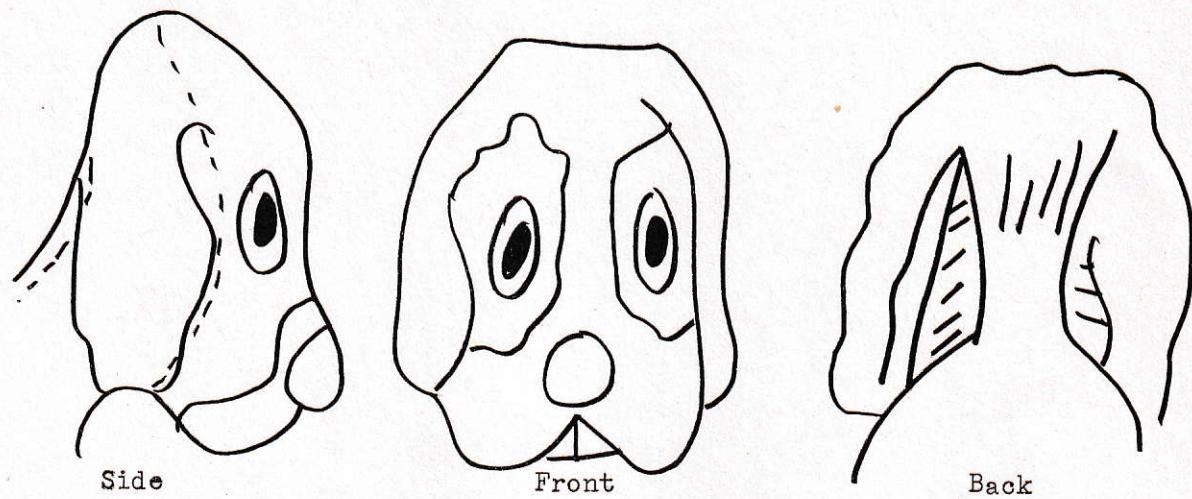
Paint them light grey or cream. Then lay out design and paint to represent beadwork.

OX YOKE





THE PUP



COVERED WAGON

1. Cut the front view first
2. Then shape the end view like this.
3. Then cut out the center of the top and bottom as per dotted line. Sandpaper it.
4. Paint any color you wish and put your Troop number on it.

Craft Manual of Owasippe

Miniature Totem Poles (a Scout Project)

Use soft wood - Balsa or white pine  
Suggest 2" x 2" x desired length  
Use sharp tools

As a test of your imagination and your  
knife craft skill.

There are many totem poles. Intricate or simple -  
symbolic or realistic. We suggest sticking to the  
two S's. For a start a beaver, indicates industry;  
bear, your physical strength; owl, wise; crow,  
craftiness; eagle, your Scouting ambition.

- 1st. Make your design on a piece of paper  
as long as your pole and as wide as its  
circumference. Include all the forms.
- 2nd. Trace onto the pole, thru carbon paper, your  
design. Attach the two papers with thumb  
tacks - it prevents shifting.
- 3rd. Start your carving - take it easy. Step by  
step.



A



B



C

- 4th. Use the large blade of your knife for the  
course features, the smaller blade for details -  
finish all features on pole -

- 5th. The wings are sawed out of a piece of  $\frac{1}{4}$  inch  
wood (from orange crate) then glued into the  
slit provided - strengthen with a couple  
of long thin brads driven in from the back  
of the pole.

- 5th. Sand carefully - clean off dust, etc.  
Decorate colorfully with enamel paints.

YES, IT CAN BE DONE. LOOK in Beard Dining Hall for several Totems indicating a  
Troop's history at Owasippe.

I have stood with several "Old Timers" who said I remember helping making them.  
Over at Camp Stuart take a look at the life size Totem made as a TROOP PROJECT.

OKAY - LET'S GO TO WORK!

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SIGN-CRAFT - BULLETIN BOARDS

For Troop Sites - Campsites - Service Departments  
Directional - Informational

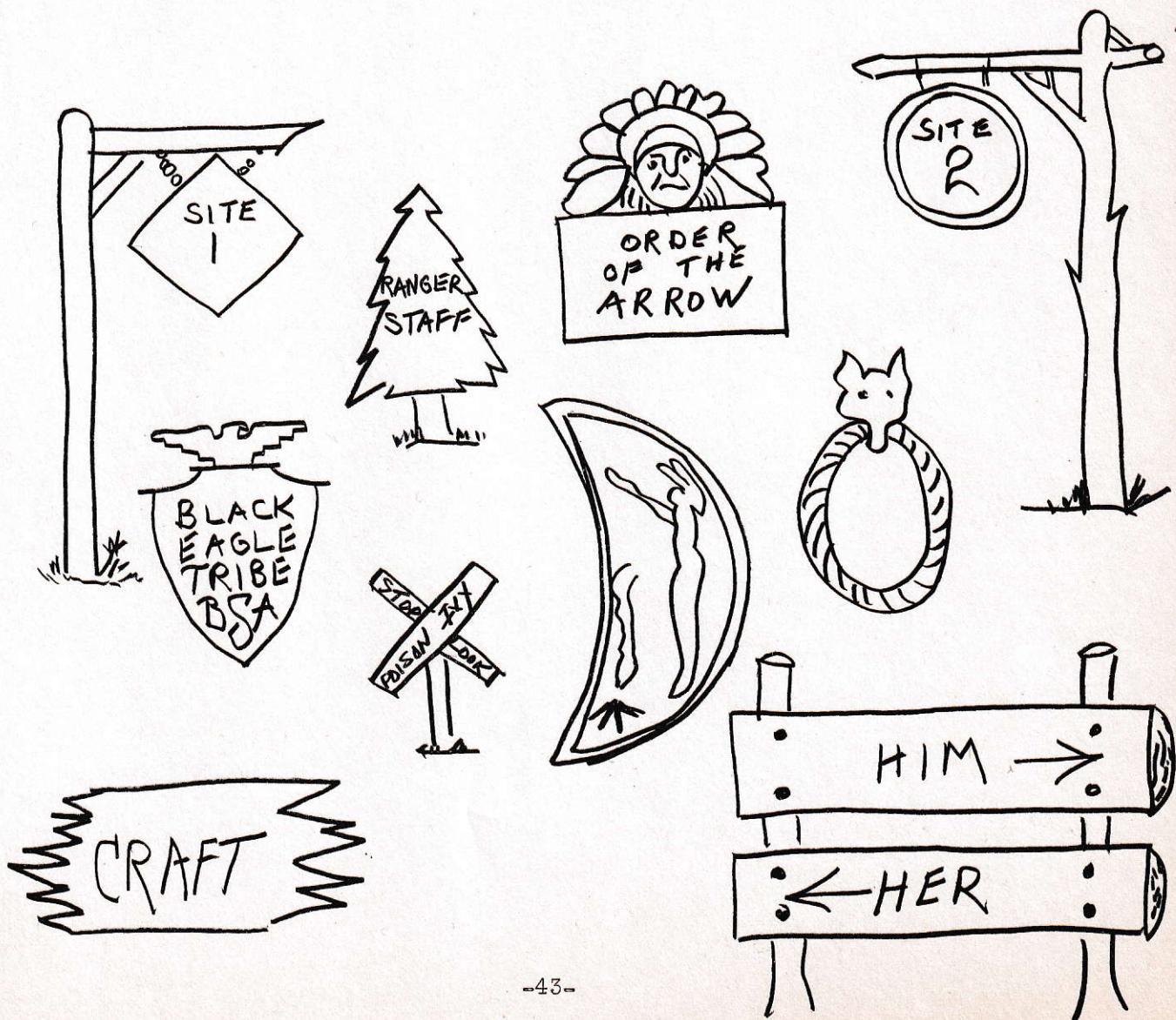
To start, decide upon the sign you need, select your design. Use wording that will meet your needs and carry the message you wish to convey.

Tools needed: You will need a few or all of the tools mentioned depending on the sign.

A scout knife, saw, axe, chisels, planes, coping saw, brace, bits, hammers, nails, screws, bolts, screw-eyes.

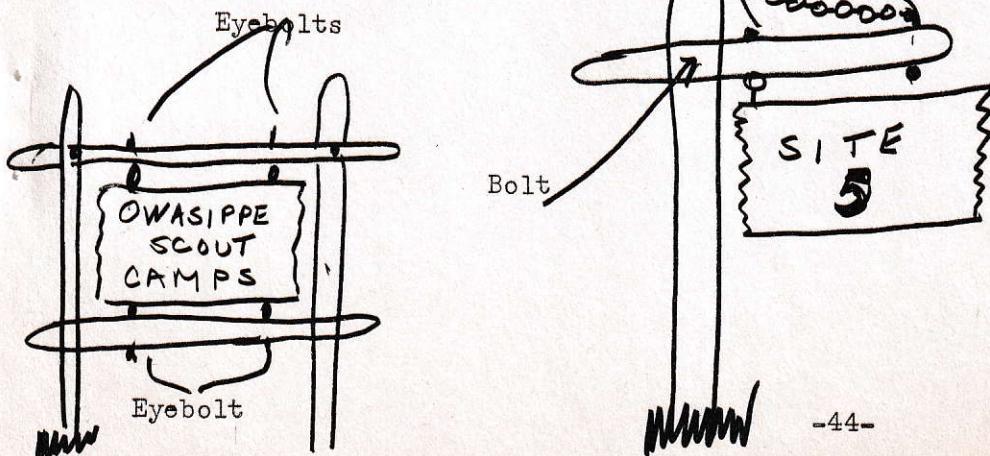
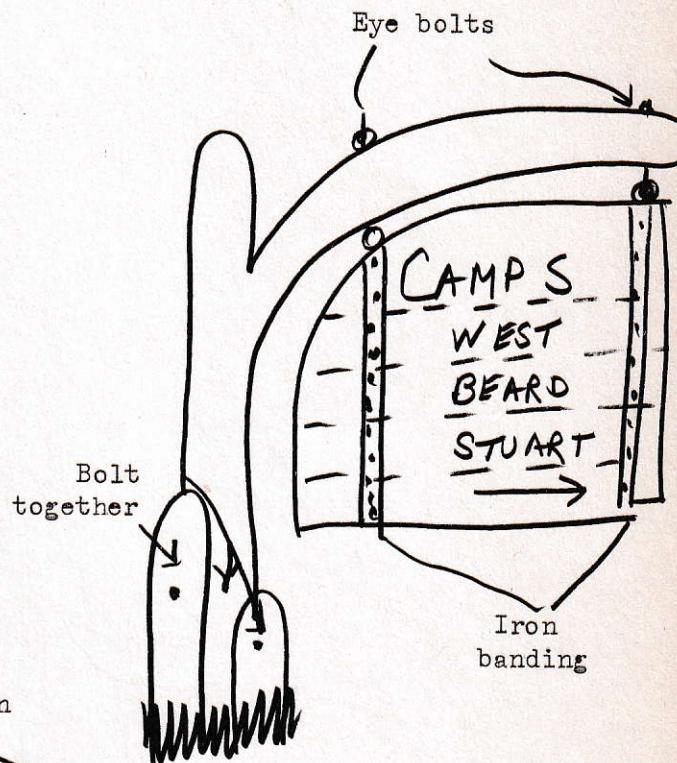
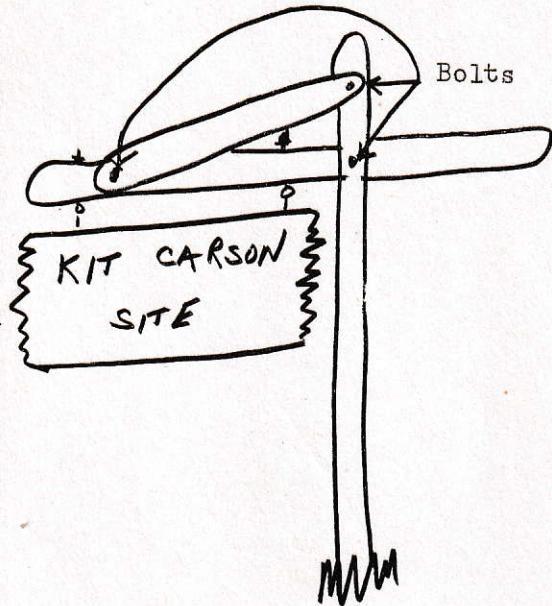
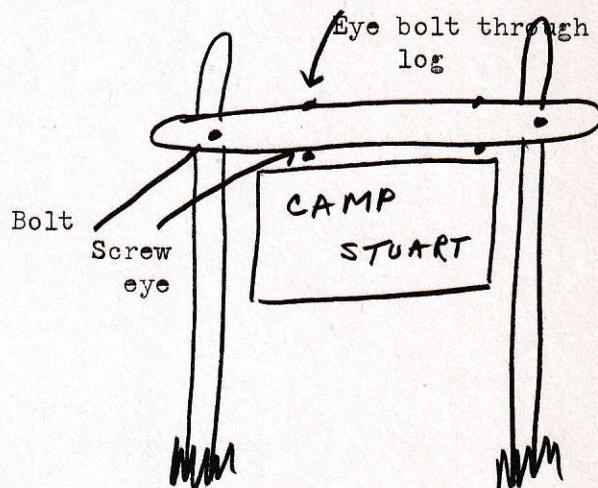
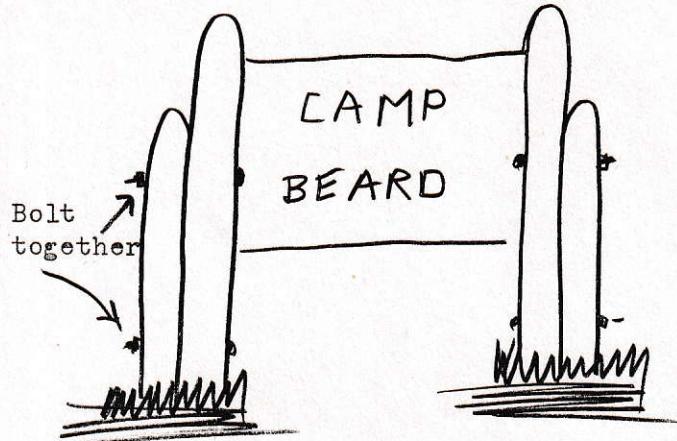
Decorating and preserving - enamel paints, shellac, varnishing.

A few ideas may be seen at all of our Camps and Chapels. Here is also a few to get you started.



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SIGNS

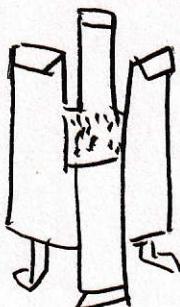
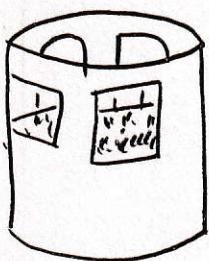


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SOME STOVE IDEAS - #10 cans or old buckets

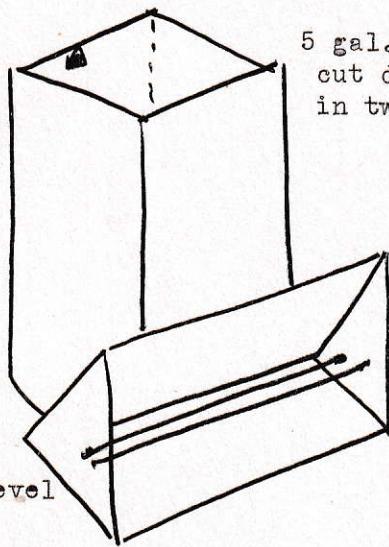


Fuel - wood or charcoal



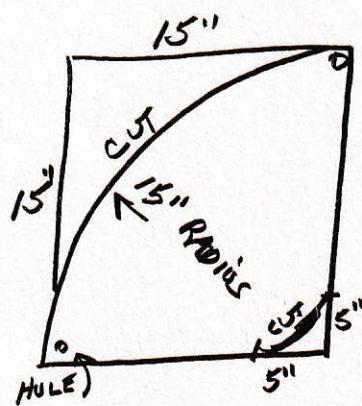
Fill base with sand  
Saturate with alcohol or  
kerosene

REFLECTOR OVENS

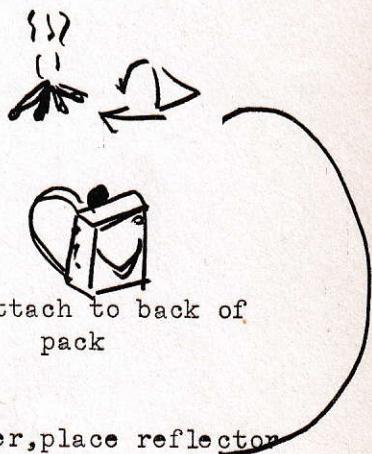


Log or  
rocks  
to  
hold level

5 gal. oil can  
cut diagonally  
in two



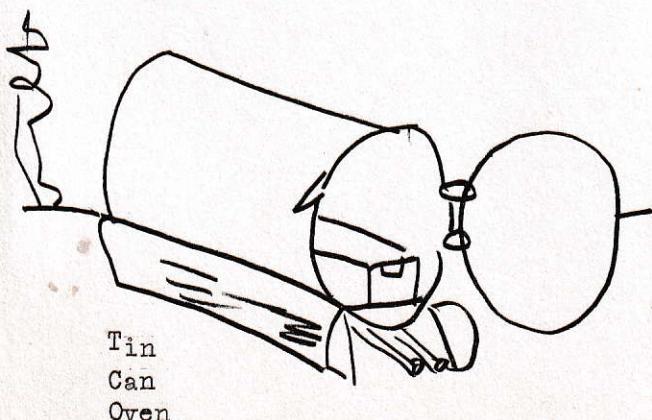
HIKEABLE REFLECTOR OVEN



Attach to back of  
pack

Move fire over, place reflector  
over over hot ground

Suggest using light gauge sheet  
aluminum. It cleans easily  
and weighs little.



Tin  
Can  
Oven

## Craft Manual of Owasippe

### TIN CAN CRAFT - for Camp and Trail

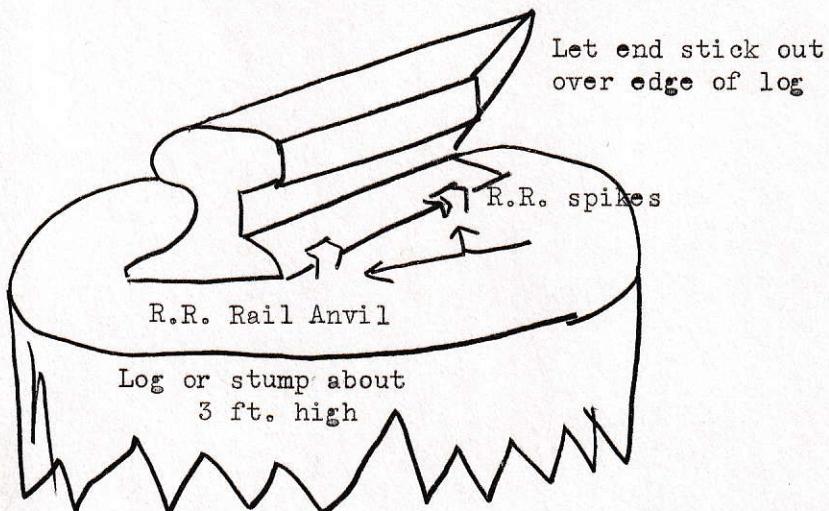
Tools: See list of standard list and their uses (add gloves for safety)

Reference: See New Tin Can Projects by Joseph J. Lukowitz

Tin Craft as a Hobby by E. Bell

Tincraft as a Hobby by Wm. Enid - Harper Bros.

Camp Honors Booklet



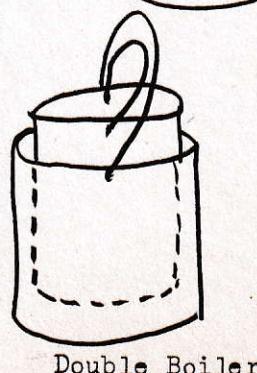
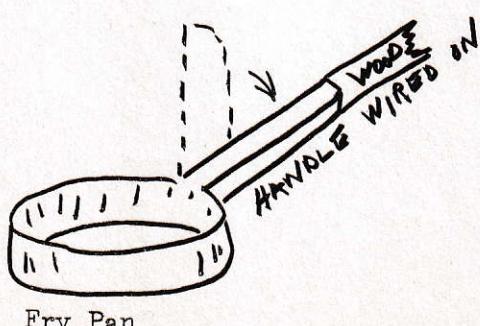
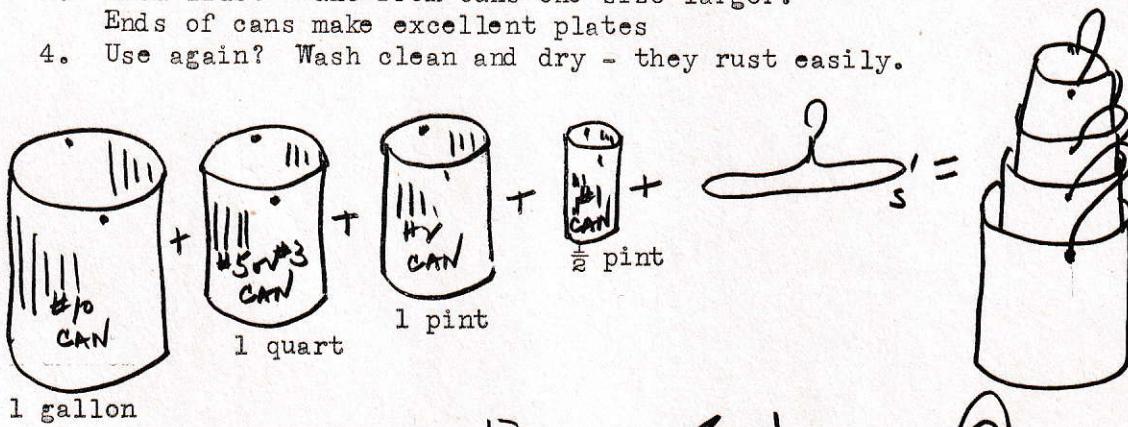
You can have the campers make anything in the way of camping gadgets and cooking gear.

Use a little thought, a little planning and a little time

### NESTING PAILS (Saves space)

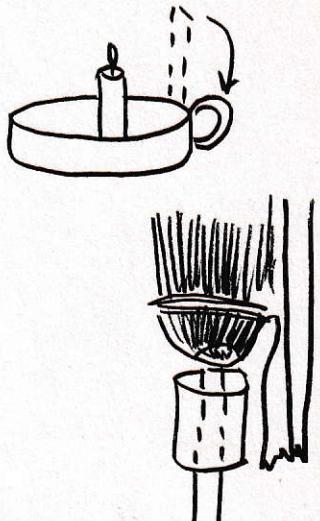
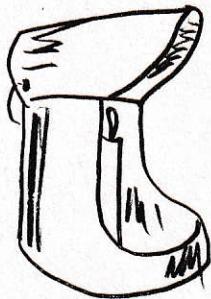
#### Instructions:

1. Clean and smooth rough edges by crimping or pounding
2. Punch holes with nails - for handles (from coat hangers)
3. Need lids? Take from cans one size larger.
4. Ends of cans make excellent plates
5. Use again? Wash clean and dry - they rust easily.

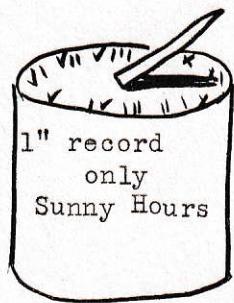


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MISCELLANEOUS TIN CAN CRAFT IDEAS



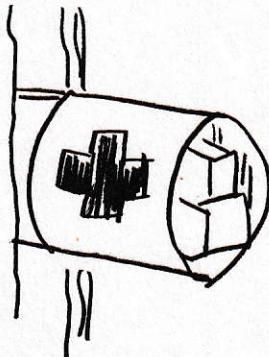
Tin can candle lanterns and holders



Sun Dial



Scoop



Broom Holder



Biscuit Cubber

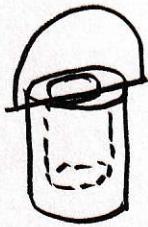


Soap Tray



Grater

For table ware



Glue Pot

Add some of your ideas for Manual revision

## Craft Manual of Owasippe

### Some Do's and Don't on Troop and Camp Projects

1. Look your camp over when you open the camping season and make a list of what you think will be prospective Troop projects.
2. Submit this list to your Camp Director for approval or rejection. (Remember funds are of a limited nature. They don't run like water).
3. With the help of your Camp Director, sell these Troop projects to the individual Troop Leaders attending camp. Tell them of the need for said project.
4. Start those projects that require the longest to complete first, then as the camping season progresses all the projects will be completed.
5. On every large project, such as stairways and the like, combine one or more Troops on the project, but remember that all Troops receive equal recognition.
6. Take pride in the fact that you as handicraft man had a hand in it. Also, point out to the leader the need for doing a good job of the project for the same reason.
7. See that the project is of a worthwhile nature, not a "time waster!"
8. Avoid duplication in projects. Try to be as original as you can. Don't copy something some other camp has.
9. Make your camp as out-doorish as you can, use native or raw lumber. See that good workmanship is practiced. No jackass carpentry.

#### Suggestions:

Gateways - camp or campsite

Signs - type that will last with burnt or carved letters

Benches

Stools

Council Rings

Nature pen

Totem Poles - as decorations for doorways and the like

Fences

Stairways

Bridges "on the trail", over small creeks (check with Program Director at Owasippe Office)

Don't forget the places where the various church services are held. Work done at these places can also be termed Troop projects. Check with Program Director at Owasippe Office for clearance before starting. These projects can also be worked on with the cooperation of other camps.

#### REMINDER

Let the Troop identify their work by using their Troop number and year it was built.

## Craft Manual of Owasippe

### Suggested List of Equipment

There is a program fund for replacement and new needs. See your Camp Director and order supplies thru him.

Quantity	Item	Use
1 - 2 oz	Ambroid	Leatherwork
1	Anvil (R.R. rail)	Tin can craft - metal work
1	Archery bow	Teaching archery
6	Archery arrows	Teaching archery
1	Archery - fletching tool	Making & repairing arrows (feathering)
2	Archery targets	Archery shooting
2	Bales of straw	Archery
2	Awls (ice picks)	Leather work
1	2" bits - Auger	Various craft work
1	1" bits - auger	Various craft work
1	3/4" bits - auger	Various craft work
1	1/2" bits - auger	Various craft work
1	1/4" bits - auger	Various craft work
6	Blades - coping saw	Light construction
6	Blades - Exacto	Light construction
6	Blades - hacksaw	Metal work
1	Blow Torch	Rustic signs - soldering
1	Brace	Woodworking
1 box	Brads - 1"	Light construction - totem poles - slides, etc.
1 box	Brads - 3/4"	Light construction
1 box	Brads - 1/2"	Light construction
1 set	Brass or tin tapping tools	Made from nails by Craftsman
2	Brushes - 2"	Sign painting
2	Brushes - 1"	Decorating, etc.
2	Brushes - 1/2"	Decorating, etc.
2 sets #1 to #6	Brushes, water color	Decorating - slides, totem poles, etc.
1	Brushes, wire	Cleaning files - metal for soldering
1	Burnisher	Leatherwork
4	Chalk, white	Blackboard work
6	"C" clamps - 3"	Holding articles in place working on them
2	"C" clamps - 4"	"
2	Chisels - cold	Metal work
1 set	Chisels - punch	Driving nails - metal wedges, etc.
1	Chisels - Wood 2"	Woodwork
2	Chisels - Wood 1 1/2"	Woodwork
4	Chisels - Wood 1"	Woodwork
4	Chisels - Wood 1/2"	Woodwork
4	Chisels - Wood 1/4"	Woodwork
2	Chisels - Gouge	Woodwork
2	Chisels - Slant	Woodwork
2	Chisels - "V"	Woodwork
1 for each Program man	- Clipboard	Records - etc.
1	Dividers	Leather and metal work
1	Drill - hand	Metal and wood work
1 set	Set of 9 - 1/16" to 1/4" drill	Metal and woodwork
2	Fids	Leatherwork

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<u>Quantity</u>	<u>Item</u>	<u>Use</u>
	Files - 10" mill 6" half round 6" round taper 6" triangle 4" round taper 4" triangle 4" flat	Sharpening axes - metal work Metal work Metal work - marking leather Metal work - stamping Metal work - tools Metal work - tools Metal work - tools
1 4 oz.	Glue - LePages	Wood construction
1	Guage - marking	Wood construction
1	Grind wheel - hand	Sharpening tools
1	Hammer - Ball Pein	Metal work
6	Hammers - claw	Wood construction
6	Hammers - small	Metal work
1	Hammer - tack	Small construction
2	Knives - draw	Wood construction - stripping bark
1	Knives - crooked	Leather work
1	Mallet - rubber	Use on chisel handles
	Merit Badge Pamphlets	
1	Archery	For guidance
1	Indian Lore	For guidance
1	Leatherwork	For guidance
1	Woodwork	For guidance
4	Modeler	Leatherwork
1 lb.	Nails - finishing	Wood construction
1 lb.	roofing	"
5 lbs.	4 P.C.	"
5 lbs.	6 P.C.	"
5 lbs.	8 P.C.	"
10 lbs.	10 P.C.	"
10 lbs.	20 P.C.	"
10 lbs.	30 P.C.	"
10 lbs.	60 P.C.	"
2	Nail sets	Wood construction
6	Nut picks	Leatherwork - modeling
1	Oil - 3 in 1	Lubrication - sharpening stone, etc.
Ordered thru Camp Director as needed	Oil paint in tubes Black - blue - green red - white yellow	Special stenciling jobs
1	Pinch or crow bar	Construction or destruction
	Paints - enamels ( $\frac{1}{4}$ or 1 pt)	
1	Black	Decorating - carvings - signs, etc.
1	Blue	"
1	Gray	"
1	Green	"
1	Orange	"
1	Red	"
1	White	"
1	Yellow	"
2	Planes - small	Wood construction
2	- large	"

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<u>Quantity</u>	<u>Item</u>	<u>Use</u>
1 tube	Plastic wood	Wood construction
2	Pliers - common	Metal work
1	" - long nose	"
1	Post hole digger	
2	Punches - single	Leatherwork
2	- revolving	"
2	Rasp - wood	Wood construction
6	Rulers - 12"	Wood construction & Leatherwork, etc.
1	Rulers - 6' folding	"
1	Yardstick	"
6	Sandpaper - #00 Extra fine	Woodworking
6	" # 0 Fine	"
6	" # 1 Medium	"
6	" # 2 Course	"
1	Saws - Buck	On logs - rustic construction
4	" Coping	Fine woodworking
3	" Cross cut	Wood construction work
2	" Hacksaw	Metal Work
2	" Rip	Wood construction work
2	Screw drivers - 3"	Craft and repair work
2	" - 5"	"
1	Scissors	Awards, patterns, etc.
	Sharpening tools	
1	Carborundum stone	Keep tools and axes sharp
1	Oil stone	"
1	Shellac - white	Signs, etc.
1	Shellac - orange	"
3	Snap fastener tool	Leatherwork
1	Soldering iron	Soldering - metal work
1	Solder - acid core in rolls	"
2	Spacer	Leatherwork
1 lb	Staples 1"	Construction
1 lb.	Staples 2"	Construction
1	Steel square	Construction
1 roll	Steel wool	Metal work
1 pkg	Tacks - carpet #4	Construction
1 pkg	Tacks - carpet #8	"
1	Tape measure - 50 ft.	
1	Tape, friction	Repairs
1	Tape, rubber	Electrical repairs
1	Tape, Scotch	Holding patterns in place
2	Tin snips - straight	Metal work
2	Tin snips - curve	"
1 qt.	Turpentine (Send over container)	Thinning paint & enamel
1 pkg	Wire nails $\frac{1}{2}$ " L. #20 G.	Small construction
1 pkg.	" 3/4" L. #18G.	"
1 pkg	" 1" L. #17G	"
1 pkg	" $1\frac{1}{4}$ " L. 16G	"
4	Vises - All purpose	Construction
1	" Wood	"
2	Woodcarving - Exacto	Small wood construction
2	Wrench - Stillson 10"	Repairs